

# J-M

## PIPE & BOILER INSULATION



H. W. JOHNS - MANVILLE CO.



Digitized by

The Association for Preservation Technology International

For the

Building Technology Heritage Library

<http://archive.org/details/buildingtechnologyheritagelibrary>

J-M  
Pipe and Boiler  
Insulation

Catalog No. 100



H. W. JOHNS-MANVILLE CO.

NEW YORK  
MILWAUKEE  
CHICAGO  
BOSTON  
PHILADELPHIA

ST. LOUIS  
PITTSBURG  
CLEVELAND  
BUFFALO  
DETROIT

BALTIMORE  
NEW ORLEANS  
KANSAS CITY  
MINNEAPOLIS  
SAN FRANCISCO

LOS ANGELES  
SEATTLE  
DALLAS  
LONDON

COPYRIGHT, 1908, BY  
H. W. JOHNS-MANVILLE CO.

# Introduction

We present in this Catalogue the principal types of Pipe and Boiler Covering perfected during our *fifty years of experience* in the manufacture of Asbestos and Magnesia Products.

The loss from radiation and condensation due to uncovered or improperly covered pipes, boilers, or furnaces directly affects the coal pile. High-class insulation is absolutely imperative owing to the present high cost of fuel and the growing demand among manufacturers to reduce the unit cost of production to a minimum. Every dollar wasted in fuel consumption detracts from the earning capacity and the profits of the plant.

Our Insulating Materials are the outcome of careful, practical experiments in this field, and have demonstrated through many years of hard service their peculiar adaptability to the purposes for which they are recommended, and the maximum earning power in coal saving. The best insulation is none too good to meet the increasing severity of modern requirements. We have made it a point to keep the efficiency of our materials abreast of the requirements, and basing our claims upon the judgments of reputable Engineers who have used our Coverings for years with eminent satisfaction, we feel safe in offering them to the trade as the most complete, most economical, most durable and efficient insulating mediums on the market.

H. W. JOHNS-MANVILLE CO.



# Index

## COVERINGS FOR HIGH PRESSURE PIPES

	PAGE
Asbestos Fire-Felt.....	9
Asbesto-Sponge Felted.....	8
Indented.....	12
Magnesia.....	10
Vitribestos.....	11

## COVERINGS FOR MEDIUM PRESSURE PIPES

Asbestocel.....	16
Air Cell.....	17
Equality (50% Magnesia).....	10
"Magno" (35% Magnesia).....	10
Molded Asbestos.....	18

## COVERINGS FOR LOW PRESSURE STEAM OR HOT WATER PIPES

Air Cell.....	17
Aqua Wool Felt.....	21
Asbestocel.....	16
"C-B" Wool Felt.....	21
Champion Wool Felt.....	21
Eureka.....	20
Express Wool Felt.....	21
Perfection.....	19
Special Wool Felt for Government specifications.....	22
Standard Wool Felt.....	21

## COVERINGS FOR HOT AIR FURNACE PIPES

Asbestocel Corrugated Blankets.....	57
Asbestocel Corrugated Paper.....	57
Asbestos Roll Fire-Felt.....	43
Non-Burn Building Felt.....	59

## COVERINGS FOR COLD WATER PIPES

Anti-sweat.....	23
Combination Felt.....	30
Frost Proof.....	22
Nonpareil Cork.....	27, 28, 29
Special Wool Felt for Government specifications.....	22
Zero.....	24

## SPECIAL COVERINGS

Asbestos Hair Felt.....	32
Asbestos Weather- and Acid-proof Jackets.....	31
Keystone Plumbing Pipe Covering.....	25
Safety Blow-off.....	13
Standard Weather-proof and Acid-proof Jackets.....	31

## FLANGE COVERINGS

	PAGE
Fire-Felt, Vitribestos, 85% Magnesia.....	14, 15

## COVERINGS FOR BRINE, AMMONIA, AND ICE WATER PIPES

Asbestos Hair Felt.....	61
Combination Felt Covering.....	30
Nonpareil Cork.....	27, 28, 29
Standard Brine and Ammonia.....	26

## SHEETS AND BLOCKS

Asbestocel.....	39
Air Cell.....	39
Asbestos Fire-Felt.....	38, 55
Asbestos Molded.....	39
Asbestos Sheet Mill Board.....	58
Asbesto-Sponge Felted.....	38
Equality 50% Magnesia (for Government work only).....	38
Howe Blocks.....	55
"Magno" Blocks (35% Magnesia).....	38
Non-Burn Asbestos Roll Board.....	59
Non-Burn Building Felt.....	59
Nonpareil Sheet Cork.....	62
Special Insulating Sheets.....	62
Vitribestos.....	38, 40, 55
85% Magnesia.....	38

## FIREPROOF CEMENTS

Arido Dry Furnace Cement.....	50
Brickline Asbestos Cement.....	56
Fireite Asbestos Furnace Cement.....	48
Phoenix Stove Lining.....	51
Vitrex Asbestos Retort Cement.....	49

## NON-CONDUCTING CEMENTS

Asbestos Cements:	
No. 340.....	42
No. 352.....	42
No. 364.....	42
Asbestos Fire-Felt Cement.....	41
Equality Cement.....	41
"Magno" (35% Magnesia) Cement.....	41
No. 302 Asbestos Cement Felting.....	42
No. 304 Hot-Blast Cement.....	42
No. 329 Asbesto-Sponge Cement Felting.....	41
Sheep's Wool Cement.....	42
85% Magnesia Cement.....	41

## CONDUIT MATERIALS

	PAGE
Asbesto-Sponge Filling.....	46-47
Cork Filling.....	46
J-M Sectional Conduit.....	44-47

## MISCELLANEOUS MATERIALS

Air Space Studs.....	39
Asbestos Lead Joint Runner.....	68
Asbestos Roll Fire Felt.....	43
Canvas.....	39
Ceiling Insulation.....	55
Cold Storage Insulation Sheets.....	62
Cold Water Paste.....	39
Ferro Cement.....	64
H-O Pipe Joint Cement.....	65
Keystone Range Boiler Cover.....	66
Leak-No Metallic Compound.....	63
Magic Boiler Compound.....	69
Mineral Wool.....	61
National Tube Cleaners.....	67
Phoenix Stove Lining.....	51
Pipe Covering Bands (brass and brass lacquered).....	39
Rosin Sized Paper.....	39
Standard Hair Felt.....	60
Twine (sewing and wrapping).....	39
Vitribestos Boiler Insulation.....	40
Vitribestos Ducts and Flues.....	54
Vitribestos Smoke Stack Linings.....	52, 53
Wire (hexagonal—binding—air space—lath).....	39

## PRICE LISTS, ETC.

All Sheets and Blocks.....	39
Table of Weights.....	35
Removal Flange Covers.....	36
Sectional Pipe Coverings and Fittings.....	33, 34





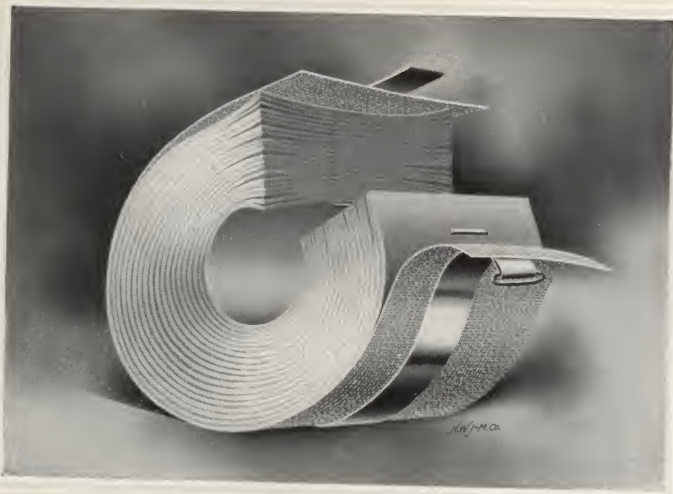
SPECIMEN OF ASBESTOS IN THE NATURAL STATE

## Asbestos

Asbestos is a *fibrous mineral* and one of Nature's unique products. It is found in various parts of the world and usually occurs in narrow veins or seams. When treated mechanically, it yields soft, white, delicate and exceedingly strong fibers, which can be spun, woven, and otherwise manufactured into many useful articles. In addition to its fire-proof qualities it is acid-proof and practically indestructible. It also forms a valuable insulator for electrical purposes.

## MAGNESIA

We wish to call special attention to our large facilities for the manufacture of Carbonate of Magnesia products of all kinds. We are prepared to furnish a most complete line of Steam Pipe and Boiler Covering, Blocks and Cements, composed of various percentages of Carbonate of Magnesia, combined with Asbestos Fiber.



J-M  
Asbesto-Sponge Felted  
Sectional Pipe Covering

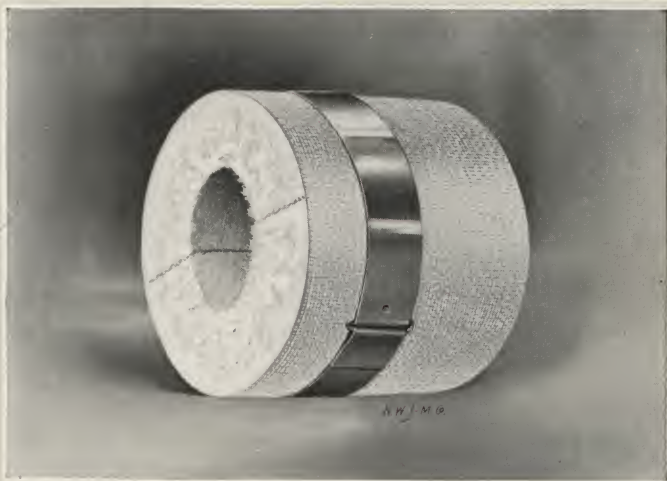
(PATENTED)

*For High Pressure and Superheated Steam Pipes*

This Covering is made from a thin felt, composed of best quality of Asbestos Fiber and finely ground Sponge, forming an extremely cellular fabric. Made up in laminated form, like the leaves of a book, it confines a large number of small particles of dead air between the layers thus securing the maximum insulating efficiency. It is tough, flexible and practically indestructible. Can be removed and replaced any number of times without deterioration. Made in sectional form, in thicknesses of  $\frac{1}{2}$  inch to 3 inches, to fit all standard sizes of pipe. Sections are cut through on one side only.

We recommend Asbesto-Sponge Felted Covering as the most efficient and economical covering for superheated and highest pressure steam.

See Price List, page 32.



J-M

## Asbestos Fire-Felt Sectional Pipe Covering

(PATENTED)

*For High Pressure and Superheated Steam Pipes*

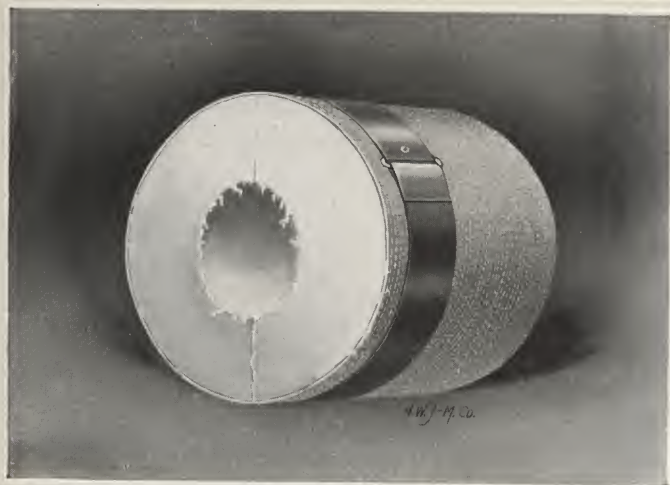
This is composed of pure Asbestos Fiber loosely felted together like hair felt, combining a large number of small air cells. It is absolutely fire-proof, and is unaffected by exposure to the weather, vibration, expansion, and contraction, or conditions common to hard shop or factory service. Its low cost and high efficiency make Fire-Felt Covering a most satisfactory insulation for general conditions in the steam plant.

Furnished in sectional form in thicknesses of 1 inch to 3 inches, to fit all standard sizes of pipe.

### NAVY BRAND ASBESTOS FIRE-FELT

This is constructed of specially selected long Asbestos Fiber, designed to meet the requirements of marine, United States and State Government specifications for a covering of high insulating efficiency combined with lightness in weight and great strength.

See Price List, pages 33 and 34.



## J-M Magnesia Sectional Pipe Coverings

**J-M 85 PER CENT. MAGNESIA COVERING.** This well-known form of high pressure pipe covering combines the high non-conducting qualities of Carbonate of Magnesia and Asbestos in a light, highly efficient insulation. It is recommended for high pressure and superheated steam surfaces.

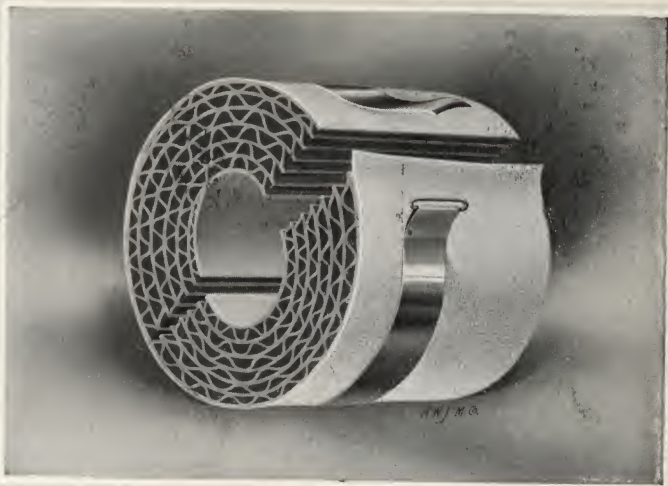
**J-M EQUALITY COVERING** consists of 50 per cent. Carbonate of Magnesia, combined with Asbestos Fiber and other fire-proof non-conducting materials. It is especially manufactured to meet United States and State Government specifications.

**J-M MAGNO COVERING** consists of 35 per cent. Carbonate of Magnesia combined with Asbestos Fiber and other insulating materials. This covering is particularly adaptable for insulating heating systems and is specified by United States and State Governments for this purpose.

These Coverings are furnished in various thicknesses from 1 to 3 inches, sectional form, to fit standard pipes  $\frac{1}{2}$  inch to 14 inches; for larger pipes, curved Segments or Blocks are supplied.

See Price List, pages 33 and 34.





J-M  
Vitribestos  
Sectional Pipe Covering  
(PATENTED)

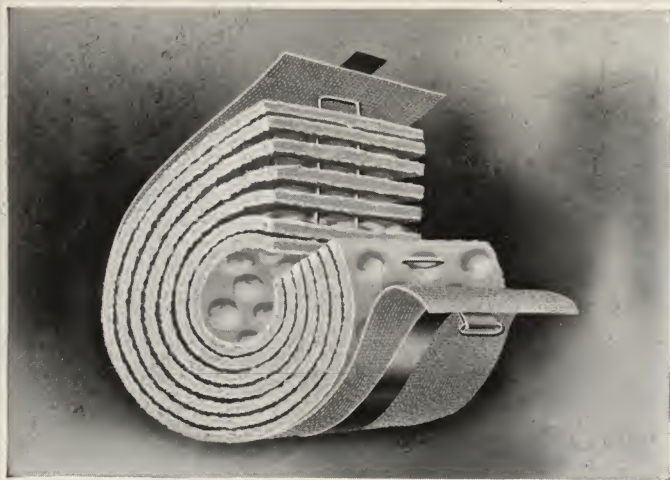
*For High Pressure Steam Pipes*

J-M Vitribestos Pipe Covering is an Asbestos air cell covering, vitrified under our patent process. It possesses high fire-proof qualities combined with great strength and insulating value. It can be applied without canvas jacket, and is adapted for superheated steam, and service in mines and general steam plant construction where subjected to dampness.

Furnished in sectional form in thicknesses of  $\frac{1}{2}$  inch to 3 inches, with jacket and bands, unless otherwise ordered.

See Price List, pages 33 and 34.





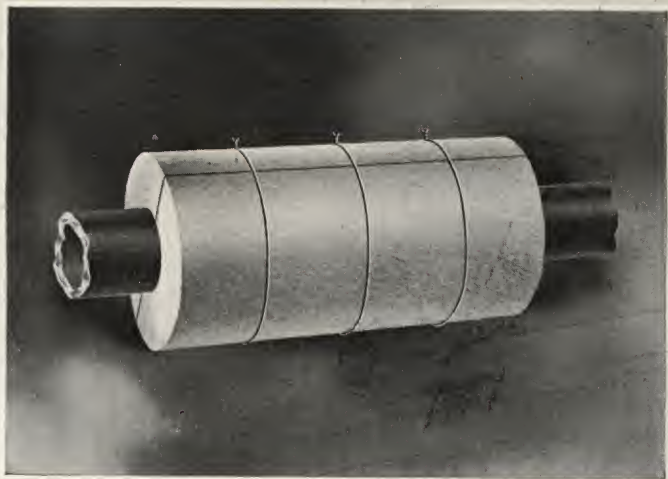
J-M  
Indented  
Sectional Pipe Covering

*For High Pressure Steam Pipes*

This Covering is made up of several layers of pure indented Asbestos Felt, wire stitched together as shown in the above cut. This construction gives high insulating properties, due to the combination of Asbestos and the air spaces formed by the indentations in the layers. J-M Indented Covering is tough and flexible and can be removed and replaced any number of times without injury. It is unaffected by vibration and is practically indestructible.

Made in sectional form in thicknesses  $\frac{1}{2}$  inch to 3 inches to fit all standard sizes of pipe.

See Price List, pages 33 and 34.



J-M  
**Safety Blow-off**  
**Sectional Pipe Covering**  
 (PATENTED)

*For Covering Blow-off Pipes*

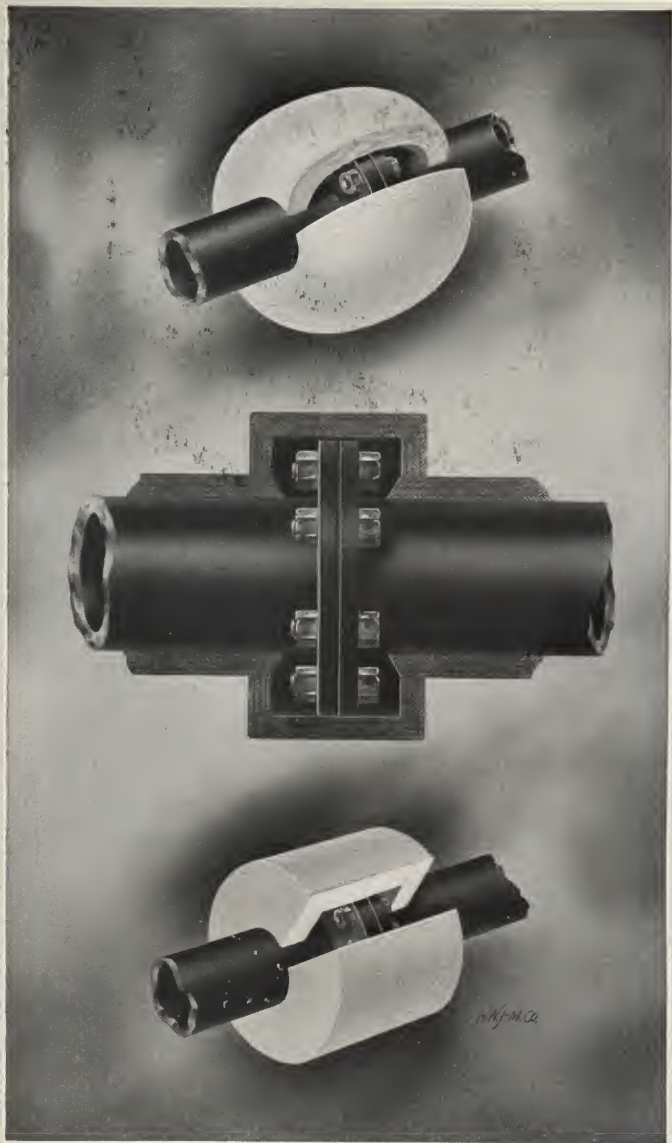
This is a reliable protection for boiler blow-off pipes against corrosion by hot gases and prevents explosions resulting from sudden changes of temperature when operating the boiler. Recommended and specified by Boiler Insurance and Inspection Companies throughout the country. Furnished in sections 12 inches long, also in elbows, in two halves for easy application. Furnished complete with wire for binding and cement for sealing joints.

PRICE LIST

Each					Each				
1	inch	Sections and Elbows,	\$1.40		2½	inch	Sections and Elbows,	\$2.50	
1¼	"	"	"	"	1.50	3	"	"	3.00
1½	"	"	"	"	1.75	4	"	"	4.00
2	"	"	"	"	2.00				

J-M PLASTIC COVERING FOR BLOW-OFF PIPES. Under certain conditions we recommend Pure Asbestos Rope Packing 1 inch thick, wound spirally around the pipe and finished with our Vitrex Asbestos Retort Cement.

Prices on application.



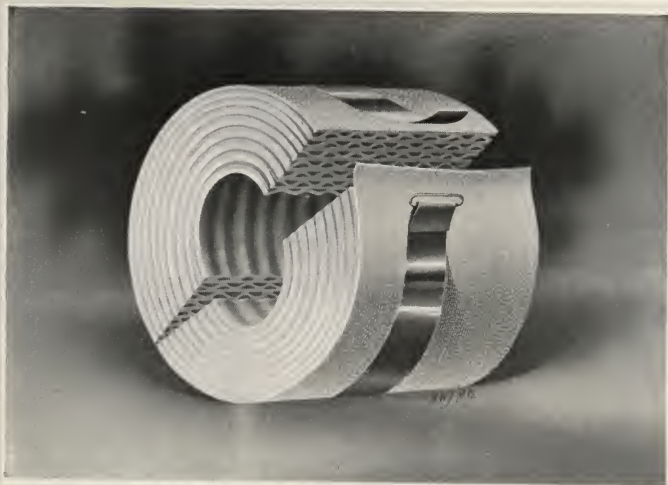
J-M

## Removable Flange Coverings

The necessity of properly covering Flanges is now generally recognized. Each Flange presents a large radiating surface and a very material loss results unless such flanges are properly protected. Flanges are in most cases left uncovered, because of the necessity of frequent repairs. J-M Removable Flange Coverings make it possible to properly protect flanges and yet be able to quickly remove and re-apply the Covering.

We are prepared to furnish Sectional Removable Flange Coverings of Magnesia, Fire-Felt or Vitribestos (as illustrated by the cuts on the opposite page), also all the standard forms of Block Coverings with wire and cement for constructing non-removable flange coverings.

See page 36 for price list on all Removable Flange Coverings.



J-M

## Asbestocel

### Sectional Pipe Covering

(PATENTED)

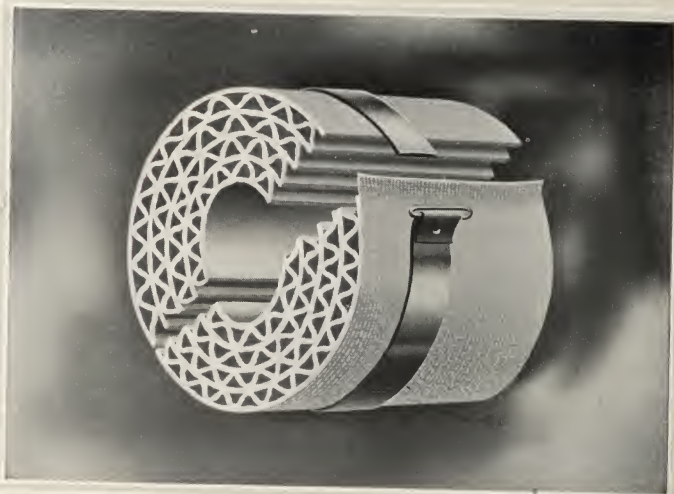
*For Medium Steam Pressure and Heating Pipes .*

J-M Asbestocel Covering is built on the arch principle, the channels running around the pipe instead of lengthwise, which prevents the circulation of air; the great objection to ordinary longitudinal air cell coverings. It will not crush down nor lose its strength, and successfully withstands vibration and hard usage. There is no loss by breakage in transportation or application. Asbestocel is the most economical covering for Heating Systems.

Made in thicknesses of  $\frac{1}{2}$  inch to 3 inches, to fit standard sizes of pipe.

See Price List, pages 33 and 34.





J-M

## Air Cell

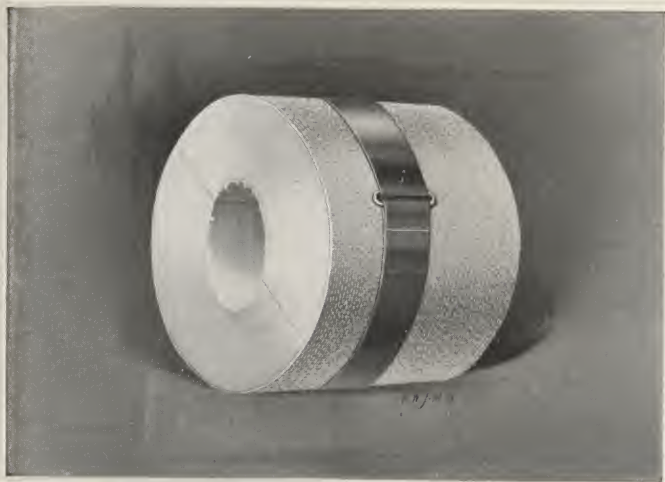
### Sectional Pipe Covering

*For Medium Steam Pressure and Heating Pipes*

A light cellular covering constructed of corrugated Asbestos paper, with the channels running lengthwise of the pipe. A well-known covering for medium and low pressure steam and hot-water pipes.

Made in thicknesses of  $\frac{1}{2}$  inch to 3 inches, to fit all standard sizes of pipe.

See Price List, pages 33 and 34.



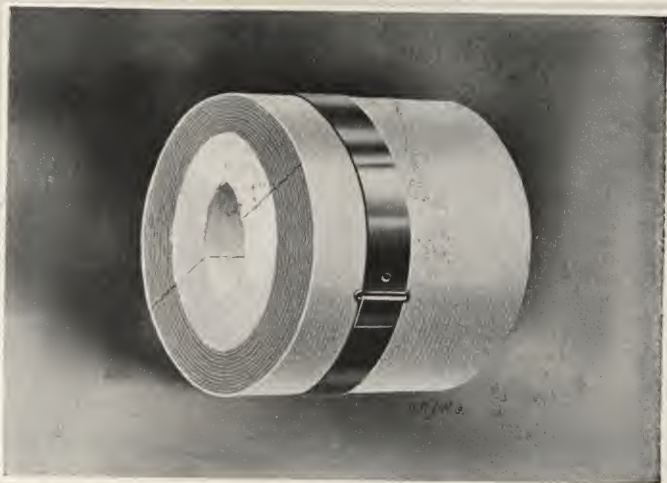
J-M  
Molded Asbestos  
Sectional Pipe Covering

*For Medium Pressure Steam Pipes*

J-M Molded Asbestos Covering is a composition of Asbestos Fiber and other fire-proof insulating material. It is a popular form of covering for medium and low-pressure steam pipes, where a low-priced covering is demanded.

Furnished in standard thickness for all standard sizes of pipe.

See Price List, pages 33 and 34.



J-M  
Perfection  
Sectional Pipe Covering

*For Low-Pressure Steam and Hot-Water Pipes*

This is a covering 1 inch thick, composed of  $\frac{1}{2}$  inch Molded Asbestos and  $\frac{1}{2}$  inch indented Wool Felt, which binds the molded portion, making it tough and durable. This construction produces an excellent non-conductor.

Furnished in sectional form to fit all standard sizes of pipes.

See Price List, pages 33 and 34.



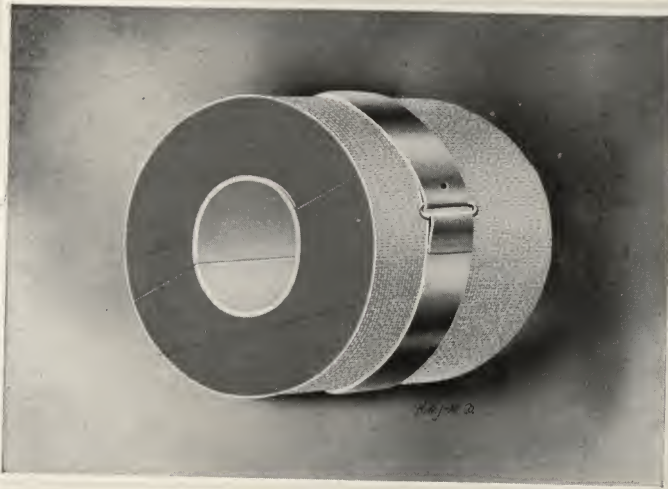
## J-M Eureka

### Sectional Pipe Covering

*For Low-Pressure Steam and Hot-Water Pipes*

J-M Eureka Covering is made of  $\frac{1}{4}$  inch Asbestos Felt on the inside of the section, and the balance ( $\frac{3}{4}$  inch) of alternate layers of Asbestos and Wool Felt, making a durable and efficient Covering. Furnished in three-foot sections; finished with canvas or oilcloth jacket, as desired.

See Price List, pages 33 and 34.



J-M  
**Wool Felt**  
**Sectional Pipe Coverings**

*For Low-Pressure Steam and Hot-Water Heating  
Systems*

These Coverings are made of Wool Felt and lined with Asbestos Paper. Recommended as an efficient and inexpensive covering for steam and hot-water heating systems.

Made in sections 3 feet long and manufactured in three styles:

“STANDARD”—Solid laminations of Wool Felt 1 inch thick with an interlining of two layers of Asbestos Paper.

“CHAMPION” OR “EXPRESS”—Solid laminations of Wool Felt  $\frac{3}{4}$  inch thick with one layer of Asbestos Paper.

“AQUA” OR “C-B”—Solid laminations of Wool Felt  $\frac{1}{2}$  inch thick with one layer of Asbestos Paper.

See Price List, pages 33 and 34.



J-M

## Special Wool Felt Sectional Pipe Covering

*To Meet Government Specifications*

In addition to the standard line of Wool Felt Coverings shown on the preceding page, we furnish special coverings to meet United States Government specifications, as follows:

### FOR HOT-WATER PIPES

Wool Felt Covering, Asbestos Lined, removable fittings; solid brass bands of not less than No. 30 gauge.

### FOR COLD-WATER PIPES

Wool Felt Covering, Tar Felt lining, removable fittings; solid brass bands of not less than No. 30 gauge.

J-M

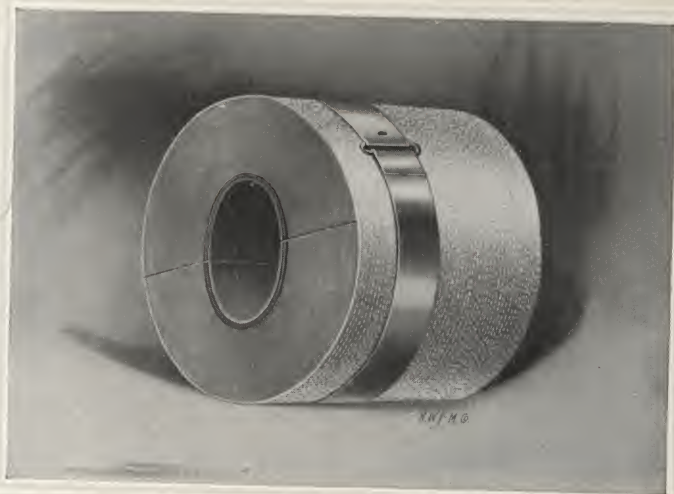
## Frost Proof Sectional Pipe Covering

*For Insulating Interior Cold-Water Pipes*

This is made of plain insulating felt 1 inch thick with an interlining of two layers of saturated felt, forming a most efficient and economical covering for the insulation of drinking-water lines in factories and large buildings. It also prevents freezing when the temperature is not too severe.

Furnished  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and 1 inch thick, to fit all standard sizes of pipe.

See Price List, pages 33 and 34.



J-M  
Anti-Sweat  
Sectional Pipe Covering

*To Prevent Condensation on Cold-Water Pipes*

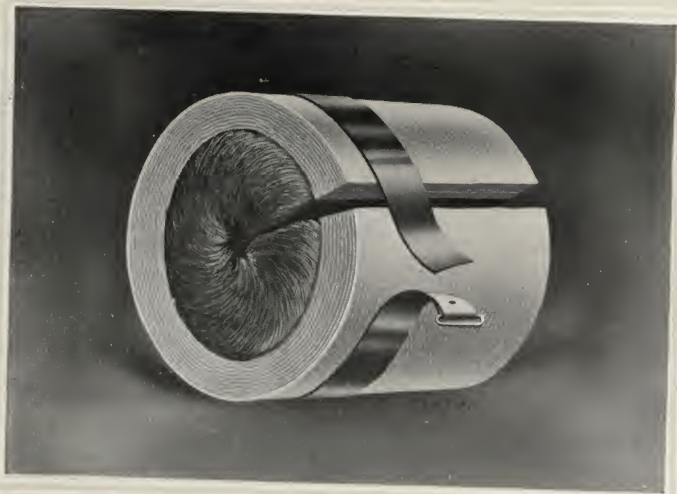
In warm weather the condensation from cold-water pipes causes considerable trouble and damage to stocks of merchandise in stores, as well as to draperies, furnishings, walls, and carpets in hotels and dwellings.

Anti-sweat Covering prevents condensation by insulating the pipe from the warm air.

This Covering is made of Water-proof Insulating Paper and Wool Felt, securely stitched together, so that the covering does not depend on paste or glue to hold it in shape.

Made in 3-foot sections in thicknesses  $\frac{1}{2}$  inch,  $\frac{3}{4}$  inch, and 1 inch to fit all standard size pipes. One inch thickness is recommended where pipes run through rooms at a temperature of 80 degrees and upwards.

See Price List, pages 33 and 34.



J-M  
**Zero**  
Sectional Pipe Covering

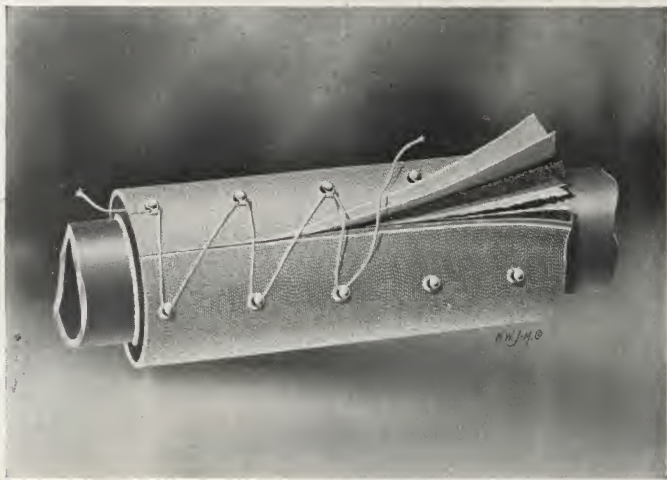
*To Protect Pipes from Freezing*

A combination of hair and wool insulating felts specially designed for the protection of cold-water pipes from freezing.

Where protection is required against low temperatures on pipes outdoors or exposed to the weather, we recommend two layers of Zero Covering, applied so as to break joints and finished with J-M Weather-proof Asbestos Roofing Jacket.

Furnished approximately  $1\frac{1}{4}$  inches thick only, for all standard sizes of pipes.

See Price List, pages 33 and 34.



J-M

## Keystone Plumbing Pipe Covering

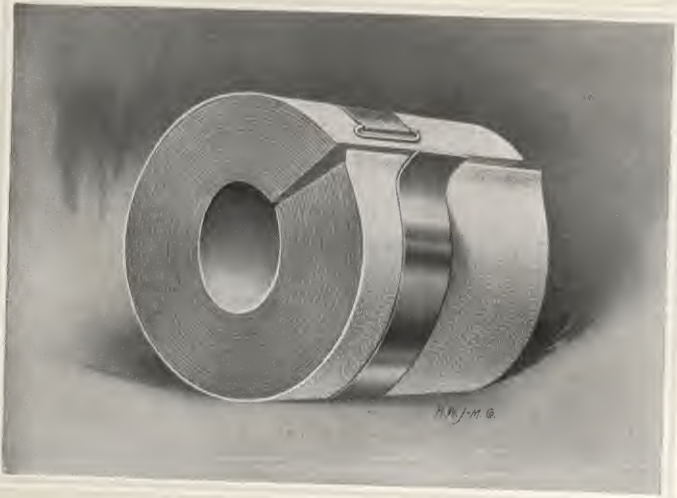
*Prevents Dripping and Freezing of Plumbing Pipes*

Keystone Plumbing Pipe Covering is made of select cattle hair, chemically treated and securely stitched between two layers of strong non-porous paper with canvas jacket. It can be applied where the space does not permit of the use of the ordinary sectional covering, and on pipes concealed in walls. Is easily attached to the pipe by lacing and can be readily applied and removed. It can also be adjusted to bends and sharp turns on all plumbing pipes where sectional covering cannot be used.

STYLE A for hot-water pipes. STYLE B for cold-water pipes.

Style A or B, Size of Pipe	List Price, Styles A or B, per Lineal Foot
For $\frac{1}{2}$ and $\frac{3}{4}$ inch	16 cents
" 1 " $1\frac{1}{4}$ inches	20 "
" $1\frac{1}{2}$ " 2 "	24 "

Write for Discounts.



J-M  
Standard  
Brine and Ammonia Pipe Covering

This is made of alternate layers of Roofing Felt or Parchment Paper and Wool Felt Paper, firmly stitched together.

This covering has been found particularly efficient as an insulation for Brine and Ammonia Pipes. Where the temperature of the refrigerant is very low a double layer of this Covering is recommended; care being taken to see that all joints are broken and the Covering sealed with J-M Ajax Asphalt Cement.

See Price List, pages 33 and 34.





## Nonpareil Sectional Cork Covering

*For Brine, Ammonia, Ice-Water and Cold-Water Pipes*

Nonpareil Cork Covering is free from cement or other binder; molded in suitable forms, the finished mass being a solid block of natural cork, retaining all its original qualities.

Molded Cork forms are made to fit various sizes of pipes and fittings, thicknesses from 1 inch to 3 inches, according to the size of pipe and service required. Cork Pipe Covering is coated inside and out with a special mineral rubber—impervious to moisture, ordinary heat, acids, and alkalis.

Cork Covering is manufactured in three styles—"Heavy" for Brine Pipe Covering; "Medium," for Ice-Water Pipe Covering; and "Light" for Cold-Water Pipe Covering.

See following pages for Price List.

# NONPAREIL CORK PIPE COVERING—PRICE LIST SCREWED FITTINGS

Size	Per Lineal Foot	Ell	Tee	Valve	Gate Valve	Cross	45° Ell	Flange Cover	Special Fittings and Long Turn Ells and Tees	Extra Long Sweep Ells and Tees
$\frac{1}{2}$ "	J .45	J .60	J .70	J .80	J .80	J 1.10	J .60	J .80	J 1.40	J 2.80
$\frac{3}{4}$ "	J .50	J .70	J .80	J .90	J .90	J 1.20	J .70	J .90	J 1.60	J 3.20
1"	J .60	J .80	J .90	J 1.00	J 1.00	J 1.30	J .80	J 1.00	J 1.80	J 3.60
1 $\frac{1}{4}$ "	J .70	J .90	J 1.00	J 1.10	J 1.10	J 1.50	J .90	J 1.10	J 2.00	J 4.00
1 $\frac{1}{2}$ "	J .80	J 1.00	J 1.10	J 1.20	J 1.20	J 1.75	J 1.00	J 1.20	J 2.20	J 4.40
2"	J .90	J 1.10	J 1.20	J 1.30	J 1.30	J 2.00	J 1.10	J 1.30	J 2.40	J 4.90
2 $\frac{1}{2}$ "	J 1.00	J 1.20	J 1.30	J 1.50	J 1.50	J 2.25	J 1.20	J 1.50	J 2.75	J 5.50
3"	J 1.10	J 1.30	J 1.50	J 1.75	J 1.75	J 2.50	J 1.30	J 1.75	J 3.10	J 6.20
3 $\frac{1}{2}$ "	J 1.25	J 1.50	J 1.75	J 2.00	J 2.00	J 2.75	J 1.50	J 2.00	J 3.50	J 7.00
4"	J 1.40	J 1.75	J 2.00	J 2.30	J 2.30	J 3.00	J 1.75	J 2.30	J 4.00	J 7.90
4 $\frac{1}{2}$ "	J 1.60	J 2.00	J 2.30	J 2.60	J 2.60	J 3.50	J 2.00	J 2.60	J 4.60	J 9.25
5"	J 1.75	J 2.30	J 2.60	J 3.00	J 3.00	J 4.00	J 2.30	J 3.00	J 5.30	J 10.50
6"	J 1.90	J 2.60	J 3.00	J 3.40	J 3.40	J 4.50	J 2.60	J 3.40	J 6.00	J 12.00
7"	J 2.10	J 2.80	J 3.20	J 3.60	J 3.60	J 5.00	J 2.80	J 3.60	J 6.60	J 13.50
8"	J 2.40	J 3.20	J 3.60	J 4.00	J 4.00	J 5.50	J 3.20	J 4.00	J 7.20	J 15.00
9"	L 3.50	L 13.75	L 15.25	L 16.50	L 16.50	L 18.00	L 13.00	L 6.50	L 23.50	L 27.50
10"	L 3.75	L 15.75	L 17.00	L 18.75	L 18.75	L 20.00	L 14.50	L 7.25	L 26.50	L 31.00
12"	L 4.25	L 18.00	L 19.25	L 21.00	L 21.00	L 23.00	L 16.00	L 8.00	L 30.00	L 35.00
14"	L 4.75	L 21.00	L 22.75	L 24.50	L 24.50	L 27.00	L 19.00	L 9.50	L 35.00	L 40.00
16"	L 5.25	L 24.50	L 26.50	L 29.00	L 29.00	L 31.00	L 22.50	L 11.00	L 41.00	L 48.00

J—Molded Cork Jackets.

L—Mitred Cork Lagging.

Reducing fittings list price of largest dimension.

All prices marked "J" include paint, wire and waterproof cement for proper application, and brine putty is included where necessary. Those marked "L" include paint, wire and brine putty, but no waterproof cement, as it is not employed in applying lagging.

Above list, subject to usual discounts.

Where pipes are too close together or too near adjacent surfaces to permit the ready application of regular sectional covering, cork centers are furnished up to and including 8" at above list, subject to usual discounts.

Prices on lagging for traps, circular tanks, coolers, etc. (36" long, 2", 3", 4", 6" wide, beveled as required), furnished on application.

# NONPAREIL CORK PIPE COVERING—PRICE LIST FLANGED FITTINGS

Ell	Tee	Valve	Gate Valve	Cross	45° Ell	Special Fittings and Long Turn Ells and Tees	Extra Long Sweep Ells and Tees	Size
J 2.50 J 3.00 J 3.50	J 3.00 J 3.50 J 4.00	J 3.50 J 4.00 J 4.50	J 3.50 J 4.00 J 4.50	J 4.50 J 5.25 J 6.00	J 2.50 J 3.00 J 3.50	J 4.00 J 4.50 J 5.00	J 4.50 J 5.00 J 5.50	3" 4" 1"
J 4.00 J 4.50 J 5.00	J 4.50 J 5.00 J 5.75	J 5.00 J 5.75 J 6.50	J 5.00 J 5.75 J 6.50	J 6.75 J 7.50 J 8.50	J 4.00 J 4.50 J 5.00	J 5.50 J 6.25 J 7.00	J 6.25 J 7.00 J 8.00	1 1/2" 1 1/2" 2"
J 5.75 J 6.50 J 7.25	J 6.50 J 7.25 J 8.50	J 7.25 J 8.50 J 9.75	J 7.25 J 8.50 J 9.75	J 9.50 J 10.50 J 12.00	J 5.75 J 6.50 J 7.75	J 8.00 J 9.25 J 10.50	J 9.25 J 10.50 J 12.00	2 1/2" 3" 3 1/2"
L 8.50 L 9.75 L 11.00	L 9.75 L 11.00 L 12.50	L 11.00 L 12.50 L 14.25	L 11.00 L 12.50 L 14.25	L 13.50 L 15.00 L 17.00	L 9.00 L 10.50 L 11.50	L 12.00 L 13.75 L 15.50	L 13.75 L 16.50 L 17.75	4" 4 1/2" 5"
L 13.00 L 15.00 L 17.00	L 14.25 L 16.00 L 18.00	L 16.00 L 17.75 L 19.50	L 16.00 L 17.75 L 19.50	L 19.00 L 21.00 L 24.00	L 13.00 L 14.50 L 16.00	L 17.75 L 20.00 L 22.25	L 20.00 L 22.25 L 24.50	6" 7" 8"
L 19.00 L 21.00 L 23.00	L 20.00 L 22.00 L 25.00	L 22.00 L 24.50 L 27.00	L 22.00 L 24.50 L 27.00	L 27.00 L 30.00 L 35.00	L 18.00 L 20.00 L 22.50	L 24.50 L 27.50 L 31.00	L 27.50 L 31.00 L 36.00	9" 10" 12"
L 26.50 L 31.00	L 29.00 L 34.00	L 31.00 L 37.00	L 31.00 L 37.00	L 40.00 L 45.00	L 26.00 L 30.00	L 36.00 L 42.00	L 42.00 L 48.00	14" 16"

J—Molded Cork Jacketts.

L—Mired Cork Lagging.

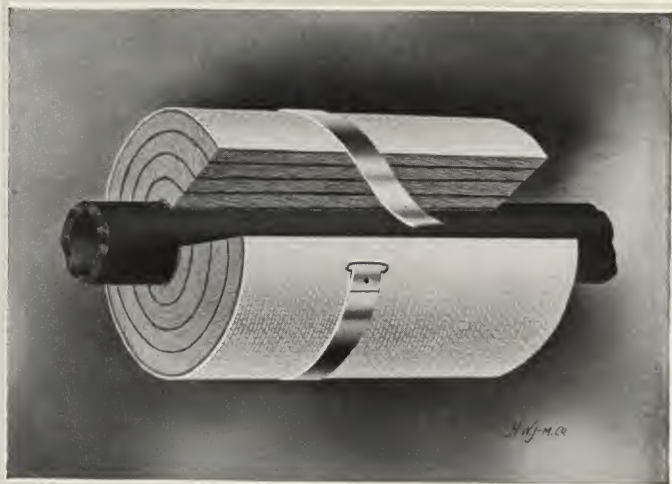
All prices marked "J," include paint, wire and waterproof cement for proper application, and brine putty is included where necessary. Those marked "L," include paint, wire and brine putty, but no waterproof cement, as it is not employed in applying lagging.

Above list subject to usual discounts.

Where pipes are too close together or too near adjacent surfaces to permit the ready application of regular sectional covering, cork centers are furnished up to and including 8" at above list, subject to usual discounts.

Prices on lagging for traps, circular tanks, coolers, etc. (36" long, 2", 3", 4", 6" wide, beveled as required), furnished on application.

Reducing fittings list price of largest dimension.



## J-M Combination Felt Covering

*For Brine and Ammonia Pipes*

This Covering consists of alternate layers of hair felt and waterproof asbestos insulating felts and is a reliable and efficient covering for very low temperatures and severe conditions, such as cold lines running through heated rooms.

Prices on application.

J-M

# Asbestos Weather- and Acid- Proof Jackets

## For Sectional Pipe Coverings

We furnish a Jacket made of Asbestos Acid- and Water-proof Felts to fit over various sectional coverings, to protect them against deterioration by the action of moisture or acid. Sufficient Water-proof Composition with which to seal the laps accompanies each shipment of Jackets.

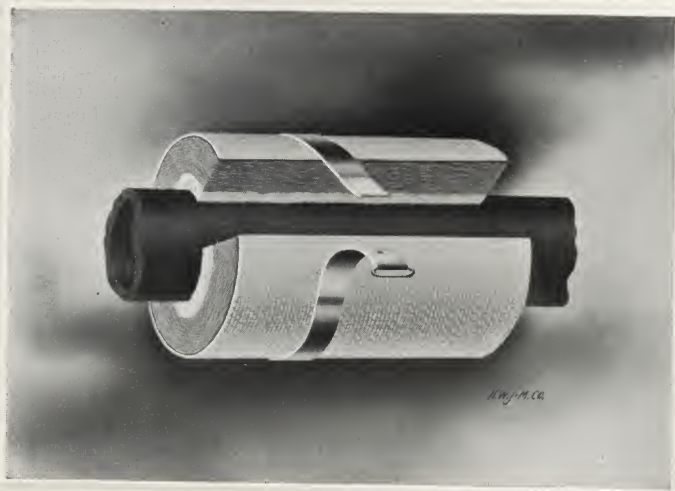
Subject to discount from lists on pages 33 and 34.

### “STANDARD ASBESTOS ” WEATHER-PROOF JACKETS

Where exposed pipes are subjected to severe weather conditions and hard usage, we furnish our “Standard” Brand Jackets. These Jackets, when properly applied with J-M Ajax Cement, prolong the life of the covering and greatly add to the efficiency. Complete with Cement and wire for fastening.

Prices on application.





## J-M Asbestos Hair Felt Covering

*For Greatest Economy on High-Pressure Steam Lines  
and Pipes Exposed to the Weather*

J-M Asbestos Hair Felt Covering consists of layers of Asbestos Hair Felt, built up on the pipe, according to our specifications.

This material is composed of long-fibered Asbestos and Cattle Hair, and without question gives the best insulating value of any form of covering. While slightly more expensive in first cost, its high insulating quality makes it the most economical covering.

As it is a continuous covering, and is not affected by expansion and contraction, it is highly recommended for long runs of exposed pipe. It is particularly adapted to mine service.

Prices on application.

J-M

# Sectional Pipe Coverings and Fittings

## PRICE LIST

### STANDARD THICKNESSES

Subject to Discount

Inside Diameter of Pipe	Price per Lineal Foot	Elbows	Tees	Crosses	Globe Valves
$1\frac{1}{8}$ in.	\$0.22	\$0.30	\$0.36	\$0.48	\$0.54
$1\frac{3}{8}$ "	.24	.30	.36	.48	.54
1 "	.27	.30	.36	.48	.54
$1\frac{1}{4}$ "	.30	.30	.36	.48	.54
$1\frac{3}{4}$ "	.33	.30	.36	.48	.54
2 "	.36	.36	.42	.54	.60
$2\frac{1}{2}$ "	.40	.42	.48	.60	.78
3 "	.45	.48	.54	.70	.96
$3\frac{1}{2}$ "	.50	.54	.60	.80	1.20
4 "	.60	.60	.75	.95	1.50
$4\frac{1}{2}$ "	.65	.72	.90	1.10	1.85
5 "	.70	.90	1.20	1.50	2.25
6 "	.80	1.30	1.60	2.00	2.80
7 "	1.00	1.80	2.20	2.80	3.60
8 "	1.10	2.40	3.00	3.60	4.40
9 "	1.20	3.00	3.80	4.40	5.30
10 "	1.30	3.60	4.60	5.20	6.20
12 "	1.85				
14 "	2.10				
*16 "	2.35				
18 "	2.60				
20 "	2.85				
24 "	3.30				
30 "	4.00				

All pipe coverings are supplied in sections three feet long, jacketed and with bands, except where otherwise specified in the descriptive matter. For irregular flanges or fittings larger than 10 inches, use our Magnesia Cement or Asbestos Cement Felting.

\* All Magnesia coverings above 14 in. furnished in segmental form; other coverings in sectional form in all sizes.

For weights of Coverings, see page 35.

For Prices on all Sheets and Blocks, see page 39.

Price List on Fittings for Extra Thick Magnesia Covering Furnished on Application.

# J-M Sectional Pipe Coverings

## PRICE LIST EXTRA THICKNESSES

Subject to Discount

Inside Diameter of Pipe	1 1/4 inches Thick per Lineal Foot	2 inches Thick per Lineal Foot	Dbl. Stan. Thick per Lineal Foot	3 inches Thick Broken Joint per Lineal Foot
1/2 inch	\$0.46	\$0.75	\$0.65	\$1.20
3/4 " "	.49	.80	.70	1.35
1 " "	.52	.85	.75	1.40
1 1/4 inches	.56	.90	.80	1.45
1 1/2 " "	.60	.95	.85	1.55
2 " "	.64	1.00	.90	1.65
2 1/2 " "	.70	1.05	1.00	1.75
3 " "	.76	1.15	1.10	1.90
3 1/2 " "	.82	1.25	1.20	2.05
4 " "	.88	1.35	1.40	2.20
4 1/2 " "	.94	1.45	1.50	2.35
5 " "	1.00	1.55	1.60	2.50
6 " "	1.10	1.70	1.80	2.70
7 " "	1.20	1.85	2.25	2.90
8 " "	1.35	2.00	2.50	3.15
9 " "	1.50	2.20	2.70	3.40
10 " "	1.65	2.40	2.90	3.65
12 " "	1.85	2.70	4.10	4.10
14 " "	2.10	3.00	4.60	4.60
*16 " "	2.35	3.30	5.10	5.10
18 " "	2.60	3.60	5.60	5.60
20 " "	2.85	4.00	6.00	6.00
24 " "	3.30	4.50	7.00	7.00
30 " "	4.00	5.50	8.40	8.40

These pipe coverings are supplied in sections three feet long, canvased and with bands.

For Weights of Coverings see opposite page.

\* All Magnesia coverings above 14 ins. furnished in segmental form; other coverings in sectional form in all sizes.

For Prices on all Sheets and Blocks, see page 39.

# LIST OF WEIGHTS

## J-M

### Sectional Pipe Coverings

Weight in Pounds, per 3-foot Section, Standard thickness.

- |   |   |
|---|---|
| 1—Asb. Sponge Felted, 1" thick.         | 8—Asb. Air Cell, $\frac{3}{4}$ " thick. |
| 2—Asb. Fire Felt, 1" thick.             | 9—Asb. Air Cell, 1" thick.              |
| 3—85% Mag. Stand'd thickness.           | 10—Wool Felt, $\frac{1}{2}$ " thick.    |
| 4—Asbestocel, $\frac{1}{2}$ " thick.    | 11—Wool Felt, $\frac{3}{4}$ " thick.    |
| 5—Asbestocel, $\frac{3}{4}$ " thick.    | 12—Wool Felt, 1" thick.                 |
| 6—Asbestocel, 1" thick.                 | 13—J-M Asbestos Molded.                 |
| 7—Asb. Air Cell, $\frac{1}{2}$ " thick. |   |

SIZE	STYLE OF COVERING												
	1	2	3	4	5	6	7	8	9	10	11	12	13
$\frac{1}{4}$ inch.	4	2 $\frac{1}{4}$	2 $\frac{1}{4}$	1 $\frac{3}{4}$	2	3	1 $\frac{1}{4}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$	16 oz.	1 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{4}$
"	4 $\frac{1}{2}$	2 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	1 $\frac{1}{2}$	2	3	18	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$
1 "	5	3	2 $\frac{3}{4}$	2 $\frac{1}{4}$	3	4	2	2 $\frac{1}{2}$	3 $\frac{1}{2}$	19	2 $\frac{1}{4}$	3	3
1 $\frac{1}{4}$ "	6	3 $\frac{1}{2}$	3 $\frac{1}{2}$	2 $\frac{3}{4}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	4	1 $\frac{1}{2}$	2 $\frac{3}{4}$	4	4
1 $\frac{1}{2}$ "	7	4	4 $\frac{1}{4}$	3	3 $\frac{3}{4}$	5	2 $\frac{3}{4}$	3	4 $\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{3}{4}$	4 $\frac{1}{2}$	5
2 "	8	5	4 $\frac{1}{2}$	3 $\frac{1}{4}$	4 $\frac{1}{2}$	6	2 $\frac{3}{4}$	3 $\frac{1}{2}$	5	1 $\frac{1}{4}$	3	5	6
2 $\frac{1}{2}$ "	8 $\frac{1}{2}$	6	5 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	7	3	3 $\frac{1}{2}$	6	2	3 $\frac{1}{4}$	6	6 $\frac{1}{4}$
3 "	9	7	6 $\frac{1}{2}$	4	6 $\frac{1}{2}$	8	3 $\frac{1}{2}$	5	7	2 $\frac{1}{2}$	3 $\frac{3}{4}$	7	7 $\frac{1}{2}$
3 $\frac{1}{2}$ "	10	8 $\frac{1}{2}$	7 $\frac{1}{2}$	4 $\frac{1}{2}$	7	8 $\frac{1}{2}$	3 $\frac{3}{4}$	6	7 $\frac{1}{2}$	2 $\frac{3}{4}$	4 $\frac{1}{4}$	8	8
4 "	11 $\frac{1}{2}$	9	8 $\frac{1}{2}$	4 $\frac{3}{4}$	7 $\frac{1}{4}$	9	4	6 $\frac{1}{2}$	8	3	4 $\frac{3}{4}$	8 $\frac{1}{2}$	9
4 $\frac{1}{2}$ "	13	9 $\frac{1}{2}$	10 $\frac{1}{2}$	4 $\frac{3}{4}$	7 $\frac{1}{2}$	9 $\frac{1}{2}$	5	7	8 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{4}$	10	11
5 "	14 $\frac{1}{2}$	10	12 $\frac{1}{4}$	5	7 $\frac{1}{2}$	10	5 $\frac{1}{2}$	7 $\frac{1}{2}$	9	3 $\frac{3}{4}$	5 $\frac{1}{2}$	11	12 $\frac{1}{2}$
6 "	16	12 $\frac{1}{2}$	13 $\frac{3}{4}$	5 $\frac{1}{2}$	8	11	6	8	9 $\frac{1}{2}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	12	14 $\frac{1}{2}$
7 "	17 $\frac{1}{2}$	13	15 $\frac{1}{2}$	6 $\frac{1}{2}$	9	12 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	10	4 $\frac{3}{4}$	7 $\frac{1}{2}$	13	16
8 "	19	15 $\frac{3}{4}$	18	7 $\frac{3}{4}$	10	15	7	9	11	5 $\frac{3}{4}$	8 $\frac{1}{2}$	14	19
9 "	20	16 $\frac{1}{2}$	21	8	12	16	7 $\frac{1}{2}$	10	12	6 $\frac{1}{4}$	11	15	20 $\frac{1}{2}$
10 "	24	18	24	9	13	17 $\frac{1}{2}$	8 $\frac{1}{2}$	11	12 $\frac{1}{2}$	7 $\frac{1}{4}$	11 $\frac{3}{4}$	16	24
12 "	33	21	33	11	15	20	10	13	15	8 $\frac{3}{4}$	12 $\frac{1}{2}$	18	33

Size of Crate, 36x36x36 inches. Weight, 70 pounds.

An approximate weight of sectional covering crated may be secured by adding 25 per cent. to weight of covering uncrated. The smaller coverings are telescoped in larger ones when packed and hence it is difficult to get more than an approximate idea of the weight per crate.

### J-M BLOCKS, SHEETS AND ROLLS

The following is the weight per square foot, 1 inch thick, of various Blocks, Sheets, and Rolls. Other thicknesses are proportionate.

Asbesto-Sponge Felted Sheets (2x3 feet).....	2 $\frac{1}{2}$ pounds.
Asbestos Fire-Felt Blocks or Sheets (24x36 ins. or 6x36 ins.)	1 $\frac{1}{2}$ "
85% Magnesia Blocks (3x18 ins. or 6x36 ins.).....	1 $\frac{1}{2}$ "
Asbestos Molded Blocks (4x18 ins.).....	2 $\frac{3}{4}$ "

(Cannot be furnished less than 1 $\frac{1}{2}$  inches thick.)

Asbestos Air Cell Sheets, $\frac{1}{4}$ inch corrugations, 3x3 feet.....	2	"
1-ply Asbestos Air Cell Paper, rolls of 240 square feet.....	75	"

# J-M

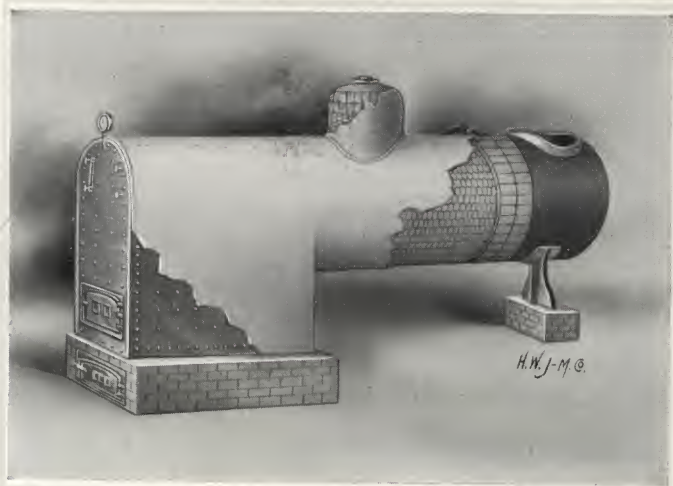
## Removable Flange Covers

### PRICE LIST

*Subject to Discount*

Size	1 Inch Thick	1½ Inches Thick	2 Inches Thick
1½ inch	\$0.50	\$0.85	\$1.00
2¼ " "	.50	.85	1.00
1 " "	.50	.85	1.00
1¼ inches	.50	.85	1.00
1½ " "	.50	.85	1.00
2 " "	.60	.90	1.10
2½ " "	.70	1.00	1.25
3 " "	.80	1.05	1.35
3½ " "	.90	1.15	1.40
4 " "	1.00	1.30	1.50
4½ " "	1.30	1.65	2.00
5 " "	1.60	2.05	2.65
6 " "	1.90	2.40	3.35
7 " "	2.20	2.70	4.20
8 " "	2.50	2.90	5.10
9 " "	2.90	3.40	5.90
10 " "	3.30	3.80	6.60
12 " "	3.75	4.50	7.50
14 " "	4.35	5.10	8.60
16 " "	5.00	6.25	9.85
18 " "	5.60	8.00	11.00
20 " "	6.40	9.00	12.50
22 " "	7.35	10.25	14.50
24 " "	8.45	11.50	16.00
30 " "	11.00	15.00	20.00





## J-M Sheets and Blocks

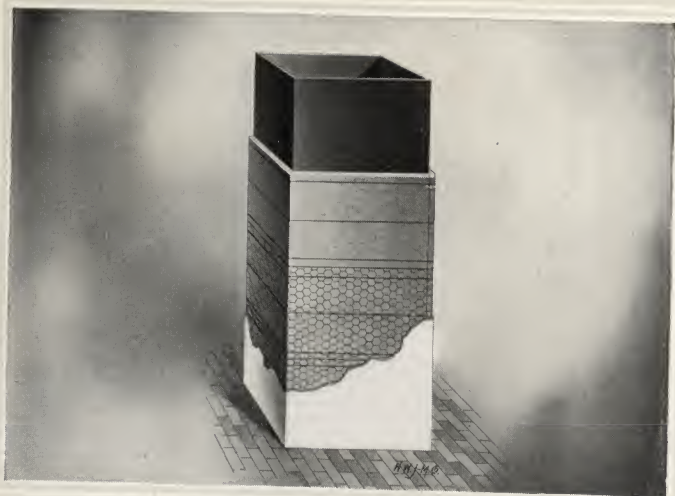
*For Boilers, Boiler Flues, Heaters, etc.*

It is quite as important to cover Boilers, Domes, Cylinders and large surfaces as it is to insulate the pipes themselves. The covering of flues and stacks reduces the temperature of the room, prolongs the life of the iron and increases the draught. For the best results on high temperature, we recommend from  $1\frac{1}{2}$ -inch to 2-inch Sheets and Blocks, wired and finished with a  $\frac{1}{2}$ -inch coat of our Asbestos or Magnesia Cement Felting.

The expansion and contraction of large sheet-metal surfaces are often so great as to injure cement coverings. In placing Sheets and Blocks next to the iron this difficulty is entirely overcome. Dry Houses, Ceilings, etc., should be lined in this way.

For pressures of 125 pounds and upwards, we recommend the application of 2-inch Sheets, or Blocks, wired on, then cover with mesh wire, and finish with  $\frac{1}{2}$ -inch coat of Cement.

For temperatures below 125 pounds, we recommend  $1\frac{1}{2}$ -inch Sheets, or Blocks, applied in the same manner, and finished with  $\frac{1}{2}$ -inch coat of Cement.



## J-M

### Sheets and Blocks—*Continued*

**J-M ASBESTO-SPONGE FELTED SHEETS.**—*For High-Pressure Steam.*—Asbesto-Sponge Felt (see page 8 for description) is furnished in sheets 2 x 3 feet in all thicknesses from  $\frac{1}{2}$  inch up.

**J-M ASBESTOS FIRE-FELT AND NAVY BRAND FIRE-FELT.**—*For High-Pressure Steam.*—Asbestos Fire-Felt (see page 9 for description) is furnished in sheets 2 x 3 feet and in blocks 6 x 36 inches. Flat, or curved to any given radius, in all thicknesses from  $\frac{1}{2}$  inch up.

**J-M 85 PER CENT. MAGNESIA.**—*For High-Pressure Steam.*—85 per cent. Magnesia (see page 10 for description) is furnished in blocks 3 x 18 inches, or 6 x 36 inches, in all thicknesses from  $\frac{1}{2}$  inch up.

**J-M VITRIBESTOS.**—*For High-Pressure Steam, Fireproof Ceilings, etc.*—Vitrbestos (see page 11 for description) is furnished in sheets 3 x 3 feet and 3 x 6 feet in thicknesses from  $\frac{1}{4}$  inch up.

**J-M EQUALITY AND MAGNO.**—*For Medium Pressure Steam.*—Equality and Magno (see page 10 for description) are furnished in blocks 3 x 18 inches, and 6 x 36 inches in all thicknesses from  $\frac{1}{2}$  inch up.

See Price List, page 39.

## J-M

### Sheets and Blocks—*Continued*

**J-M ASBESTOCEL.**—*For Medium Pressure Steam, Heating Boilers, etc.*  
—Asbestocel (see page 16 for description) is furnished in sheets 3 feet square, or blocks 6 x 36 inches, or special sizes in all thicknesses from  $\frac{1}{4}$  inch up.

**J-M AIR CELL.**—*For Medium Pressure Steam, Heating Boilers, etc.*  
Air Cell (see page 17 for description) is furnished in sheets 3 feet square, or blocks 6 x 36 inches, or special sizes in all thicknesses from  $\frac{1}{4}$  inch up.

**J-M ASBESTOS MOLDED.**—*For Medium Pressure Steam, Heating Boilers, etc.*—Asbestos Molded (see page 18 for description) is furnished in blocks 4 x 18 inches and in thicknesses from 1 inch up.

### PRICE LIST

#### ALL SHEETS AND BLOCKS

$\frac{1}{8}$ inch	\$0.27	$2\frac{1}{8}$ inches	\$0.64
$\frac{3}{16}$ "	.27	$2\frac{1}{4}$ "	.68
$\frac{1}{4}$ "	.30	$2\frac{3}{8}$ "	.72
$\frac{5}{16}$ "	.30	$2\frac{1}{2}$ "	.75
$1\frac{1}{8}$ inches	.34	$2\frac{5}{8}$ "	.79
$1\frac{1}{4}$ "	.38	$2\frac{3}{4}$ "	.83
$1\frac{3}{8}$ "	.42	$2\frac{7}{8}$ "	.87
$1\frac{1}{2}$ "	.45	3 "	.90
$1\frac{5}{8}$ "	.49	$3\frac{1}{4}$ "	.98
$1\frac{3}{4}$ "	.53	$3\frac{1}{2}$ "	1.05
$1\frac{7}{8}$ "	.57	4 "	1.20
2 "	.60		

For Weights of Sheets and Blocks, see page 35.

#### COVERING ACCESSORIES

We are prepared to furnish the following accessories as used in connection with our insulation materials:

Rosin Sized Paper.

Twine (sewing and wrapping).

Wire (hexagonal, binding, air space, and lath).

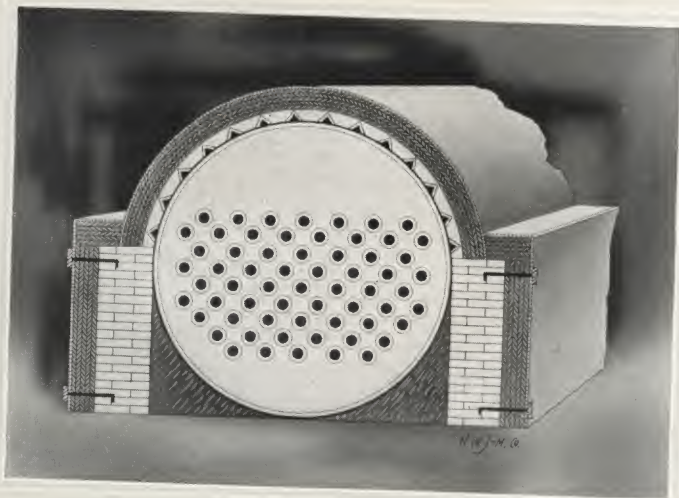
Pipe Covering Bands (brass and brass lacquered).

Canvas.

Air Space Studs.

Cold Water Paste.

Prices on application.

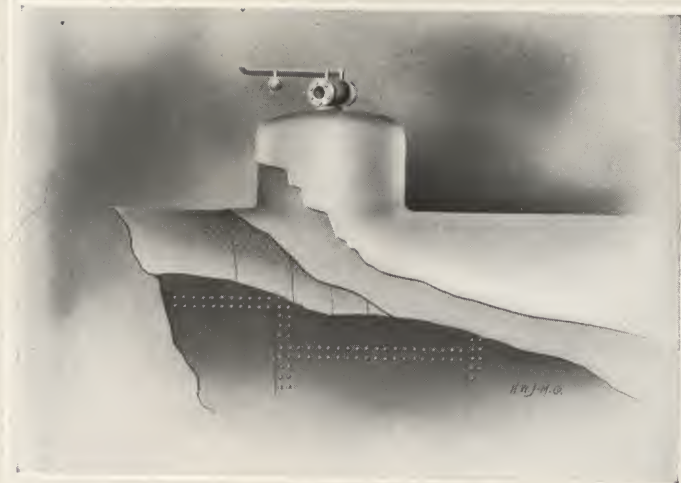


J-M

## Vitribestos Boiler Insulation

Vitribestos Sheets, because of their great strength and high insulating qualities, make the most satisfactory covering for boiler tops. They can be walked on without danger of crushing, and may be removed and replaced without injury. We recommend the covering of the brick setting of modern boilers with VITRIBESTOS SHEETS fastened by bolts set in the wall when built. This prevents the passage of air through the openings in the brick wall, which greatly decreases the boiler efficiency.





## J-M Asbestos and Magnesia Insulating Cements

We recommend these Cements for finishing over sheets and blocks, for insulating large heated surfaces, and for irregular surfaces and fittings where it is impossible to apply either sectional pipe covering or blocks.

**J-M ASBESTO-SPONGE CEMENT FELTING No. 329, 80-pound bag...** \$3.75

This is the highest grade of plastic insulating material manufactured. The Asbestos Fiber and Sponge combine into an exceedingly porous covering with high insulating properties and a large covering capacity.

**J-M CARBONATE OF MAGNESIA CEMENT:**

J-M 85 per cent. Magnesia Cement, 60-pound bag.....\$7.50

J-M Equality Cement (50 per cent. Magnesia), 80-pound bag... 6.00

J-M Magno Cement (35 per cent. Magnesia), 80-pound bag.... 6.00

This is a mixture of Carbonate of Magnesia and Asbestos Fiber on the same principle as Magnesia Sectional Pipe Covering.

**J-M ASBESTOS FIRE-FELT CEMENT, 120-pound bag.....**\$4.50

This form of insulation, owing to its lightness and heat-insulating qualities, is recommended where a less expensive insulation is required, than the blocks and cement finish. For general conditions this Cement is a most satisfactory insulation.



## J-M

### Asbestos and Magnesia Insulating Cements— *Continued*

#### J-M STANDARD CEMENT FELTINGS:

No. 302, 120-pound bag.....	\$4.50
“ 340, 100 “ “ .....	3.00
“ 352, 100 “ “ .....	3.00
“ 364, 100 “ “ .....	3.00

#### J-M ASBESTOS HOT BLAST CEMENT No. 304, 140-pound bag.....\$4.50

This Cement is composed of entirely fire-proof materials. Especially recommended for covering superheated steam surfaces and surfaces that are liable to become red hot.

### Directions for Applying Different Grades of Cement

Mix the Cement thoroughly with water, about the consistency of ordinary mortar. Apply first coat rough about  $\frac{1}{2}$  inch thick. After it is dry apply second coat to desired thickness and smooth down with trowel. This in some cases is all that is necessary, but to make a durable and efficient Covering, especially on vertical boilers and large heated surfaces subject to vibration, it is well to apply over the second coat hexagonal wire, as shown in cut on page 41. Over this apply the Cement troweled to a hard finish to cover the wire and make a smooth surface for painting or canvas jacketing.

## J-M

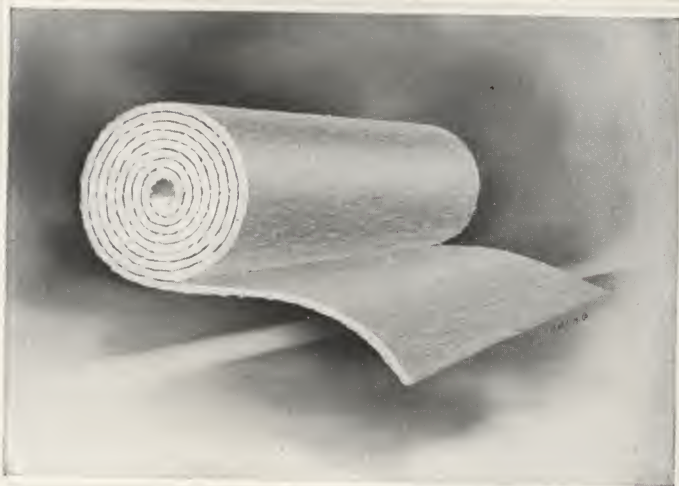
### Sheep's Wool Cement

No. 1 First and Finishing Coat, per bag of 125 pounds.....	\$3.75
No. 2 Scratch Coat, per bag of 90 pounds.....	3.75

This Cement is especially adapted to steam surfaces exposed to the weather, such as in boats, saw-mill, and mine work. It can be remixed and reapplied without loss.

**MODE OF APPLICATION.** This material is applied in plastic state, wound spirally with strong muslin, and in a few hours dries into a tough, compact mass.

The fiber of the wool knits together, making a firm, continuous elastic covering, and precludes the possibility of its cracking.



J-M

## Asbestos Roll Fire-Felt

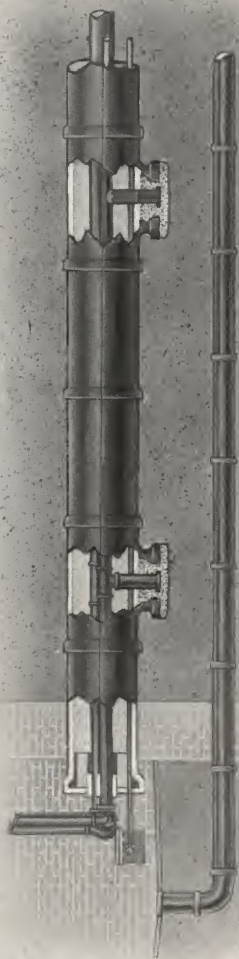
(PATENTED)

Being made entirely of Pure Long Staple Asbestos, Asbestos Roll Fire-Felt is absolutely fire-proof and a most efficient insulator against heat and cold. Its flexibility, perfect fire-proof and insulating qualities, and reasonable cost, make it invaluable for use in floors, walls, ceilings, etc., as a fire stop; for wrapping heated pipes which are too close to adjacent pipes or partitions to permit of the use of thicker or less flexible materials, such as sectional coverings; for use between the steel shell and the brick setting of Water Tube Boilers, to take up expansion and contraction and prevent the setting from cracking; for covering heaters and heating pipes in cellars to prevent the heat from escaping and to prevent fire from overheated pipes, etc.

Made in rolls 300 square feet, 36 inches wide.

### PRICE LIST

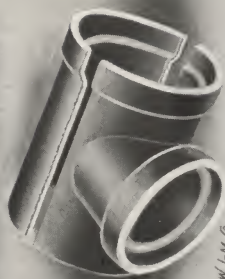
	Per Sq. Ft.
$\frac{3}{32}$ inch thick.....	\$0.12
$\frac{1}{8}$ " " .....	.16
$\frac{1}{4}$ " " .....	.20



UNION



ROLL FRAME



SUPPORTING TEE

*H. W. F. M. Co.*

# J-M Sectional Conduit

(PATENTED)

## *For Underground Insulation*

A simple, practical, permanent and efficient protection and insulation for underground steam, hot water, refrigerating, oil pipes, etc. Every condition met with in underground installation has been fully provided for. The illustrations on the opposite page show clearly the completeness of this system.

The results are highest efficiency, plus permanency, without maintenance charges. Being specially made, under our patented construction, of the highest grade sewer pipe materials, J-M Sectional Conduit will not deteriorate. This cannot be said of wooden boxes or coverings, no matter how well built. J-M Sectional Conduit is cheaper than brick or cement tunnels or trenches, and gives superior results.

J-M Sectional Conduit is not ordinary tile—it is specially made in perfectly matched half sections with rough edges. As opposed to channel pipe, the glazed and irregular edges of which cannot be matched and securely cemented, J-M Conduit can be easily cemented and made water-tight. This feature is most important for underground work.

## THE INSTALLATION

An installation of J-M Sectional Conduit is made up of the plain conduit sections, supporting tees with roll frames, observation tees, unions, insulation, and shutters, with manholes or pits, etc., as required.

THE SUPPORTING TEE is one of the most important features of J-M Sectional Conduit. It is so placed upon, and so incloses a concrete base in which is placed the roll frame for pipe supports, that it provides for the support of the pipes and their contents without permitting any of this weight to rest upon the conduit, the movements of the pipe thus producing no effect on the conduit. This method of support, when properly installed, is sufficient to bear any weight that may be put upon it, and is obtained without leaving or causing openings which may admit water.

THE ROLL FRAMES, together with the supporting tees, make a practical and thorough support for the pipes. They are ordinarily made to provide for the support of from one to four pipes, but they can be made to order to hold any combination of pipes that may be contained in the conduit.



J-M

## Sectional Conduit—*Continued*

INSULATION.—The most efficient and economical method for insulating steam and hot water pipes is to fill the conduit around the pipe with J-M ASBESTOS-SPONGE FILLING. This system provides for a minimum of 3 inches of insulation, producing a higher efficiency than by any other method.

This is a composition of pure asbestos fiber and sponge so mixed as to furnish a light and resilient material, high in insulating value—which withstands the highest temperatures without injury.

For brine and ammonia pipes we recommend our specially prepared Cork Filling.

THE UNDERDRAIN, while no more essential to this form of conduit than to any other successful conduit, is a most valuable adjunct. It serves to keep the water from about the conduit, thus lessening the transmission of heat because dry earth will absorb or conduct heat with less readiness than wet earth or water. It also lessens the danger of a leakage of water into the conduit. Its cost is but a few cents a foot, which is very small in proportion to the benefits derived.

THE OPENING OF THIS CONDUIT at any time after its installation may be readily accomplished without injury to the conduit, if carefully done, by using a flat cold chisel along the line of the side joints. The conduit may be put together again and be perfect in every respect.

Special prices for complete installation on application.

*Write for Special Catalogue of J-M Sectional Conduit.*



PRICE LIST AND TABLE OF INFORMATION ON J-M SECTIONAL CONDUIT

Inside diameter of Conduit.....	6"	8"	10"	12"	15"	18"	20"	22"	24"	27"	30"
Conduit per ft., in 3-ft. lengths.	\$0.36	\$0.60	\$0.90	\$1.20	\$1.62	\$2.04	\$2.70	\$3.30	\$3.90	\$7.14	\$9.25
*Supporting tee, each, 3 ft. long..	1.62	2.70	4.08	7.80	14.92	17.86	23.64	28.89	34.14	53.56	69.30
*Observation tee, each, 3 ft. long	1.62	2.70	4.08	7.80	10.56	13.26	17.56	21.46	25.36	35.70	46.20
Union, each, 3 ft. long.....	....	3.90	5.88	7.80	10.56	13.26	17.56	21.46	25.36	35.70	46.20
Bend, each, 18 in. from center	....	....	....	....	....	....	....	....	....	....	....
in each direction.....	1.32	2.40	3.60	4.80	6.48	8.16	10.80	13.20	15.60	33.60	46.20
2-roll frame.....	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00	7.50	8.00
4-roll frame.....	Not made in these sizes	....	....	7.50	8.00	8.50	9.75	13.00	15.00	16.00	17.00
Diameter (internal) of base of supporting tee.....	....	8"	10"	12"	15"	15"	18"	20"	20"	22"	24"
Distance center of Conduit to center of 5-in. underdrain....	....	15"	17"	18"	20"	22"	24"	25"	27"	29"	31"
Weight of Conduit per ft. in lbs.	....	22	32	46	65	85	100	120	136	230	290
Approx. weight of 2-roll frame..	35	40	50	60	75	80	85	90	95	105	115
Gross int. area of Conduit in sq. inches.....	28.274	50.265	78.540	113.097	176.715	254.469	314.160	380.133	452.390	572.555	706.800
Thickness of shell of Conduit...	$\frac{5}{8}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "	1"	$1\frac{1}{8}$ "	$1\frac{1}{4}$ "	$1\frac{3}{8}$ "	$1\frac{5}{8}$ "	$1\frac{5}{8}$ "	$2\frac{1}{4}$ "	$2\frac{1}{2}$ "

Asbesto-Sponge Conduit Filling (approx. 7 lbs. per cu. ft.) in 30-lb. bags; \$320.00 list per ton.  
 \* Except 6", 8" and 10", which are 2 ft. long.

Special net prices on application for electric conduit.  
 Special prices on application for tile pipe for underdrain or other purposes.  
 27" and 30" are made double thick.  
 All shipments are at the risk of the purchaser. No allowance for breakage.  
 The 4-roll frames with rolls approximate 50% heavier than the 2-roll frames.  
 Discounts on application.



J-M

## Fireite Asbestos Furnace Cement

The strongest and most durable plastic cement in use for "setting up" and repairing broken joints in furnaces, ranges, heaters, and stoves. It is prepared ready for use, adheres readily and firmly to castings and tin, and "sets" in a few hours after application. When subjected to heat it vitrifies without shrinking or becoming porous. It is inodorous, and effectually prevents escape of smoke, gases, and dust, thus insuring perfect draft.

### PRICE LIST

Barrels, 400 to 800 pounds, per 100 pounds.....	\$3.20
Kegs, 100 to 400 pounds, per pound.....	.04½
50-pound pails, per pound.....	.05
25-pound pails, per pound.....	.05½

Single Can Each		Per Dozen	
10-pound Cans .....	\$0.75	1 dozen in case.....	\$7.20
5 " " .....	.50	2 " " .....	3.60
2 " " .....	.25	2 " " .....	1.92
1 " " .....	.15	2 " " .....	1.20



J-M

## Vitrex Asbestos Retort Cement

This plastic cement is indispensable in Gas and Chemical Works for repairing broken clay and iron retorts and pipes, and cementing fittings, connecting pipes and flange-joints, also for cementing joints in stone, wood, and metal. It is ready for use and can be easily applied with a trowel. It hardens rapidly, vitrifies without shrinking when subjected to intense heat and is fire- and acid-proof. It is not injured by acids, petroleum oils, etc., and effectually prevents the escape of vapors.

### PRICE LIST

Barrels, 400 to 600 pounds, per pound.....	\$0.04½
Kegs, 100 to 300 pounds, per pound.....	.05
Pails, 25 to 50 pounds, per pound.....	.06

	Single Can Each		Per Dozen
10-pound cans .....	\$1.00	1 dozen in case.....	\$10.50
5 " " .....	.60	2 " " .....	6.75
2 " " .....	.35	2 " " .....	3.75
1 " " .....	.25	2 " " .....	2.25



## J-M Arido Dry Furnace Cement

Arido Dry Furnace Cement can be depended upon to make permanently tight joints when used for setting up or repairing furnaces, ranges, heaters, stoves, etc. It adheres firmly, is not affected by fire, is absolutely acid- and gas-proof, and it does not crack or shrink away from the iron nor does it become porous or brittle. It matches perfectly the color of the iron when dry, and does not leave an unsightly joint as do ordinary fire-clay cements.

Being furnished in dry form it goes farther and there is no loss by hardening, freezing, deterioration, or rusting of the can, as is often the case with the cheap plastic cements. Its light weight and small bulk make Arido the most economical in shipping and handling.

### PRICES

3½-pound bags, per dozen (2 dozen per case).....	\$3.75
(Equal to 5 lbs. cement when mixed)	
7-pound bags, per dozen (2 dozen per case).....	\$7.25
(Equal to 10 lbs. cement when mixed)	
35-pound bags, each.....	\$2.50
(Equal to 50 lbs. cement when mixed)	
70-pound bags, each.....	\$3.75
(Equal to 100 lbs. cement when mixed)	
300-pound barrels, per 100 pounds.....	\$3.75





J-M

## Phoenix Asbestos Stove Lining

This is a perfect substitute for, and a great improvement upon, the old style of firebrick for lining new and repairing all styles of linings to cooking stoves, ranges, heaters, etc., also for lining doors of boilers, furnaces, and setting up firebrick in bridge walls, etc.

Costs less than firebrick, will conform to irregular surfaces, does not burn out, and clinkers will not adhere to it. Can be readily applied by mixing with water according to directions.

### PRICE LIST

Single packages, each.....	\$0.50
Cases of 20—7-pound paper bags, per case.....	6.40
“ “ 24—Small packages, *per case.....	3.60
“ “ 24—Medium packages, *per case.....	6.00
“ “ 24—Large packages, *per case.....	8.40
Loose in barrels of about 300 pounds, per pound.....	.03

\* Put up in square cartons.





J-M

## Vitribestos

### Smoke Stack Linings

Vitribestos forms a durable, thin, light lining 2 inches thick, impervious to moisture and absolutely unaffected by gases of combustion; positively protects stacks from corrosion and deterioration from sulphuric gases and acid fumes.

Heretofore such stacks have been lined with radial brick about 5 inches thick, weighing 100 to 130 pounds per cubic foot. Vitribestos Lining, with all attachments, weighs only 30 pounds per cubic foot in place, or about 5 pounds per square foot of stack area; while the brick lining weighs at least 50 pounds per square foot, or at least ten times as much.

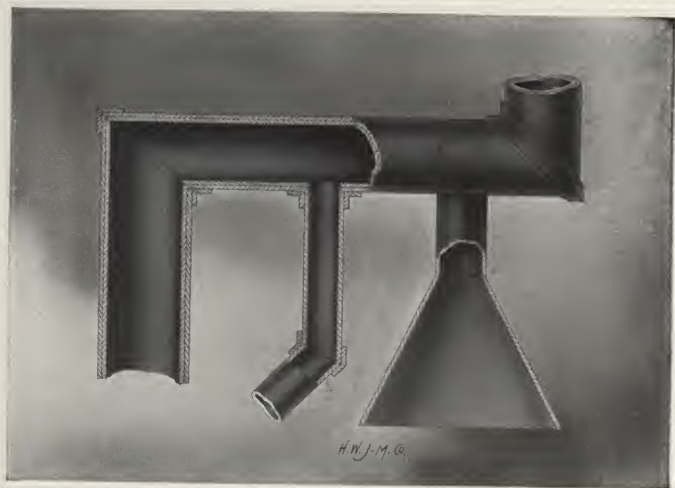


FIG. 1.—Sectional view of lining, showing angles, lugs, and bolts.

FIG. 2.—Sectional view, showing face of lugs, bolts, and angles for Vitribestos Lining of smoke stacks.

This weight must be considered in determining the strength of foundations and in its general strain on the entire building, all of which is one riveted unit. The weight of the lining must ultimately be supported by the steel. A lining weighing only one-tenth of any other lining must result in such a saving of steel, by allowing reduction in diameter and thickness, as to almost pay the difference in the first cost. *A 5-inch lining obstructs in a 6-foot diameter smoke stack 26 per cent. of the opening, and a 2-inch lining not quite 11 per cent.*

Write for Vitribestos Catalogue, in which these materials are fully illustrated and described.



J-M

## Vitribestos Covering

### For Ducts and Flues

Vitribestos Sheets and Blocks, because of their great strength and fire-proof qualities, are especially valuable for covering hot-air ducts and flues to prevent radiation and danger of ignition to surrounding woodwork.

Vitribestos Sheets, built up on iron framework and covered with our Vitrex Asbestos Acid-proof Cement, form a most durable flue for conducting hot gases or chemical fumes, etc.

Prices on application.

J-M

## Ceiling Insulation

The ordinary ceilings over boiler rooms, etc., being poor non-conductors, allow the transmission of heat to the rooms immediately above, making them uncomfortable, especially in warm weather. False ceilings constructed from J-M Insulating Sheets on an angle-iron framework and finished with Asbestos Cement, or ordinary plaster, overcome this difficulty by their high insulating value. We recommend the following material for best results:

ASBESTOS FIRE-FELT (see page 38): Furnished in sheets 3 x 3 feet, or blocks 6 x 36 inches. For best results use 2-inch thickness finished with  $\frac{1}{2}$ -inch Fire-Felt Cement.

VITRIBESTOS (see page 38): Furnished in sheets 3 x 3 feet, or 3 x 6 feet. We recommend for highest insulation 2-inch thickness and  $\frac{1}{2}$ -inch Fire-Felt Cement.

"HOWE" INSULATION (patented): Made in sheets 2 x 3 feet, or blocks 6 x 36 inches, of successive layers of Corrugated Asbestos Fire-proof Insulating Felt and Plaster. This forms an unusually strong and durable ceiling insulation where plaster finish is preferred.

J-M

## Brickline Asbestos Cement

A fire-resisting cement especially prepared for immediate application in setting up and lining firebricks in every kind of service. It possesses high heat-resisting properties, is very adhesive and will vitrify under intense heat, binding the bricks together with great firmness. It prevents clinkers adhering to the brick, always presents a clean and smooth surface and is a much stronger binder than any similar cement.

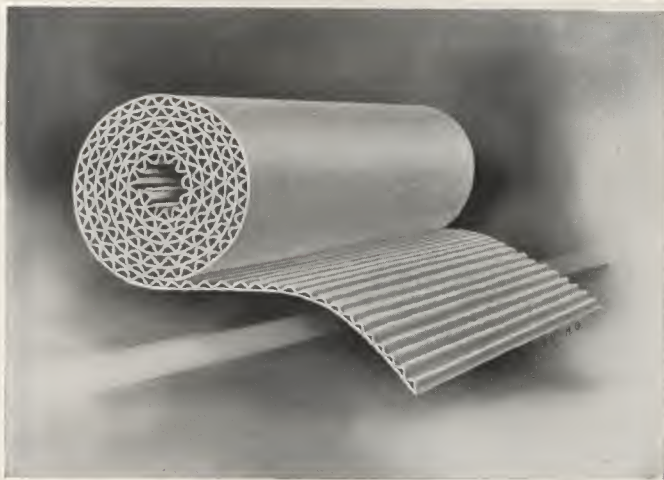
### PRICE LIST

Put up in the following size packages:

Barrels of 600 pounds, per pound.....	\$0.05
Half Barrels of 300 pounds, per pound.....	.05½
Kegs of 100 to 300 pounds, per pound.....	.06
Pails of 25 to 50 pounds, per pound.....	.07
10-pound cans, 1 dozen to a case, per case.....	12.00
10-pound cans, less than dozen quantities, each.....	1.25

APPLICATION. Brickline when used for setting up or lining firebricks should be applied in a thin coat either with trowel or brush. Best results can be obtained by first immersing the bricks in Brickline and then setting them in place and pointing up.





## J-M Asbestocel Corrugated Fire- Proof Paper

(PATENTED)

*For Covering Heater Pipes, etc.*

Asbestocel is a corrugated paper formed of successive corrugations of an asbestos felt, held firmly together by an asbestos fire-proof backing. In the corrugations of this paper a large amount of dead air—which is the most efficient insulator known—is confined, thus preventing loss of heat.

Asbestocel, being absolutely fire-proof, does away with the danger of fire from overheated furnaces and pipes. It also prevents pipes from rusting by protecting them from moisture. These are important features.

It can be easily applied by anyone. No tools are necessary. Simply wrap it around whatever you wish to insulate and fasten with wire wound spirally.

In rolls 3 feet wide containing approximately 250 square feet.

	Per sq. ft.
1-ply, about $\frac{1}{4}$ inch thick, 250 square feet, per roll.....	\$0.10
2-ply, $\frac{1}{2}$ inch thick, per square foot.....	.15

### ASBESTOCEL BLANKETS

Where standard sizes of tin furnace pipes are to be covered, we furnish Asbestocel Blankets with reinforced flaps for ready fastening. These are sheets of one-ply Asbestocel Corrugated Fire-proof Paper, 36 inches long, and of the proper width to fit standard pipes.

Prices on application.



J-M

## Asbestos Sheet Mill Board

Especially adapted for fire-proof lining of floors, partitions, etc. Also for packings, fire screens, lining for ranges, stoves, grates, gas backs, etc. Made from pure Asbestos Fiber and is fire- and acid-proof.

Standard Sheets 40 x 40 inches or 42 x 44 inches.

### APPROXIMATE WEIGHTS AND THICKNESSES

$\frac{1}{32}$ inch	—2	pounds	per	sheet
$\frac{3}{64}$ "	—3	"	"	"
$\frac{1}{16}$ "	—4	"	"	"
$\frac{3}{32}$ "	—6	"	"	"
$\frac{1}{8}$ "	—8	"	"	"

$\frac{3}{16}$ inch	—12	pounds	per	sheet
$\frac{1}{4}$ "	—14	"	"	"
$\frac{3}{8}$ "	—23	"	"	"
$\frac{1}{2}$ "	—27	"	"	"

Made in three grades, hard, medium, and soft.  
Medium furnished unless otherwise specified.

### PRICES

Standard sizes and thicknesses, per pound, list.....\$0.10



## J-M Non-burn Asbestos Felt and Roll Board

This is a fireproof material especially adapted for fireproof construction because of its high heat-resisting qualities. It is used for lining side-walls, floors, wood partitions, covering heater pipes, etc. Will not disintegrate, is odorless and vermin proof. Put up in rolls, 36 inches wide, weighing approximately 100 pounds each.

### APPROXIMATE WEIGHTS AND THICKNESSES

6	pounds	per	100	square	feet	(1½–100 inches.)
10	“	“	“	“	“	(2¼–100 inches).
14	“	“	“	“	“	(¾ inch).
30	“	“	“	“	“	(1⅙ inch).
45	“	“	“	“	“	(¾ inch).
56	“	“	“	“	“	(1 inch).

### PRICES

List Per Lb.

Non-burn Asbestos Building Felt, 6 pounds to 30 pounds..... \$.06  
 Non-burn Asbestos Roll Mill Board, ¾ inch and 1 inch thick... .08



## J-M

# Standard Hair Felt

Hair Felt is largely used for lining refrigerators, refrigerator cars, and ice houses; also recommend it for insulating hot water pipes applied over Asbestos and for the protection of cold water pipes against freezing. Made from selected cattle hair by an improved felting process. Put up in bales 6 feet wide containing 300 square feet. Can be furnished 3 feet wide if desired without extra charge.

### PRICE LIST

	Per Sq. Ft.
$\frac{1}{4}$ inch thick.....	\$.04
$\frac{1}{2}$ " " .....	.04 $\frac{1}{4}$
$\frac{3}{4}$ " " .....	.05 $\frac{1}{4}$
1 " " .....	.06 $\frac{1}{2}$
1 $\frac{1}{2}$ " " .....	.10
2 " " .....	.13

J-M

## Mineral Wool

*For Fire-proofing and Cold Storage Insulation*

"J-M" Mineral Wool is an especially clean, long staple material free from sulphur, weighing about 12 pounds per cubic foot. Shipped in 60-pound sacks.

We charge 12 cents each for sacks, which, however, will be refunded on their return, freight charges prepaid.

Prices on application.

J-M

## Asbestos Hair Felt

(PATENTED)

This felt is composed of pure Asbestos Fiber and long staple Cattle Hair. It forms a desirable covering for steam pipes and boilers, for mining purposes, etc. It is very elastic, and owing to the large proportion of asbestos, is not liable to injury from steam heat. Enormous quantities are in use throughout the country. In all tests this Felt has shown superior insulating properties over all other forms of covering.

In rolls 5 feet wide, containing about 500 square feet each;  $\frac{3}{8}$  inch thick; per square foot.....\$0.10





J-M

## Insulation for Cold Storage

For insulating cold rooms and refrigerators in breweries, abattoirs, ice plants, cold storage plants, creameries, and for vaults, we recommend the following material :

**J-M SHEET CORK:** This form of insulation has been approved as standard by refrigerating experts and is extensively used in all the large cold storage operations. It is impervious to moisture, heat, acids, and alkalis. Furnished in blocks 12x36 inches; all thicknesses and in two grades, Pure and Impregnated. We also furnish various grades of granulated cork for filling. This is recommended where great strength and high insulating value is required.

**J-M SPECIAL INSULATING SHEETS:** Made of specially prepared pulp molded under hydraulic pressure. Furnished in sheets 3x3 feet, all thicknesses; recommended where great strength and high insulating value is required.

J-M

## Leak-No Metallic Compound

Leak-No is a chemical metallic compound, prepared in powdered form and used by mixing with water to a stiff putty. When in this state it is a plastic chemical material that metallizes in a few hours and becomes a part of the casting to which it is applied. When hard it has the same color as cast iron.

During its metallizing process, it expands so that it perfectly fills the leak, and as it expands equally with iron and steel, it makes a permanent repair.

Leak-No differs from all other compounds for similar purposes in that it does not adhere as a cement, but by amalgamation with the metal itself. It will hold any pressure up to and including 1,000 pounds. It will not flake off. It will resist any heat, acid, gas, or oil that iron will stand.

It goes farther and makes permanent repairs where all others fail.

### PRICE LIST

	Per Pound
1 pound can.....	\$1.00
5    "    " .....	.90
10   "    " .....	.90
25   "    " .....	.85
50   "    " .....	.75

# J-M

## Keystone Range Boiler Cover

(PATENT APPLIED FOR)

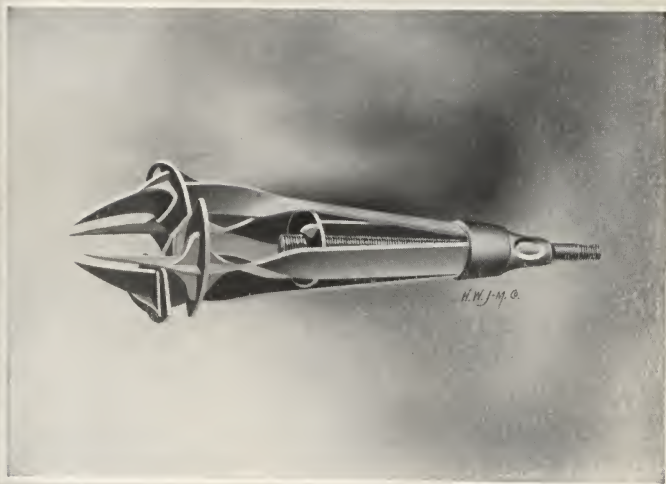


The Keystone Cover consists of a thick layer of Keystone Hair Insulator faced with an Asbestos lining on the side next to boiler. It is covered with a canvas jacket, provided with hooks, so that it can be fastened in place on the boiler by lacing with wire, as shown in the cut. This is a ready-to-apply covering, which can be put on the boiler in a few minutes, and keeps the heat in the boiler—where it is needed.

### PRICE LIST

Size of Cover		List Price, Complete
		Each
18	gallon tank, 12 x 36 inches	\$1.80
24	" " 12 x 48 "	2.70
30	" " 12 x 60 "	3.00
35	" " 13 x 60 "	3.60
40	" " 14 x 60 "	3.90
52	" " 16 x 60 "	4.50
66	" " 18 x 60 "	4.80

Other sizes furnished at proportionate prices.



J-M

# National Steel Tube Cleaner

(PATENTED)

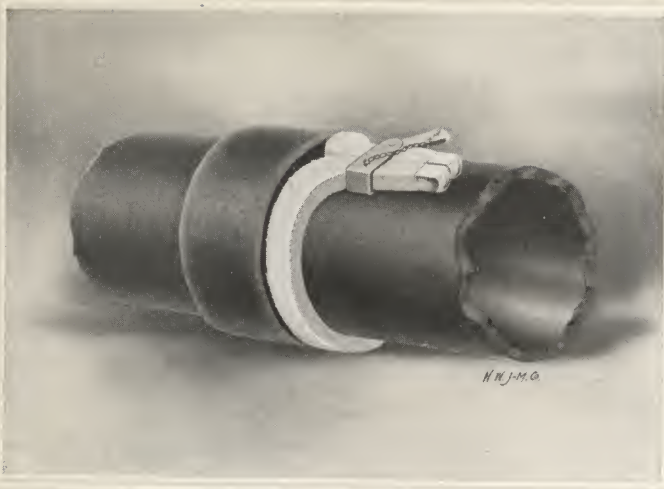
*For Cleaning Boiler Tubes*

All the working parts are of steel. It has no small parts to get out of order. Can be adjusted so as to fit exactly the inside of the tube.

Saves its cost every time it is used.

## PRICE LIST

1½ in.	1¾ in.	2 in.	2¼ in.	2½ in.	2¾ in.	3 in.
\$2.00	\$2.00	\$2.00	\$2.25	\$2.50	\$2.75	\$3.00
		3¼ in.	3½ in.	4 in.		
		\$3.25	\$3.50	\$4.00		
4½ in.	5 in.	5½ in.	6 in.	7 in.	8 in.	10 in.
\$4.50	\$5.00	\$5.50	\$7.50	\$18.75	\$21.25	\$23.75



J-M  
Asbestos Lead Joint Runner

For making lead joints in cast-iron gas and water pipe, the J-M Asbestos Lead Joint Runner is the most practical device on the market.

It is made of specially prepared pure asbestos rope, having a ferrule on each end and provided with a clamping device for fastening in place on the pipe.

Owing to the shape of the device and its flexibility, it covers the pipe joint snugly, so that there is no leakage of lead nor any unnecessary lead left protruding from the joint, to be afterward chipped off.

Being made of asbestos, it will not char or burn from contact with molten metal. Clamp is of simple construction, with nothing to break or wear out. *It is practically indestructible.*

## PRICE LIST

No	Improved	$\frac{3}{4}$ inch	square	for	2,	3 and	4 inch	pipe.....	Each
1	"	$\frac{3}{4}$	"	"	4,	5 and	6	"	\$1.25
2	"	1	"	"	6,	8 and	10	"	1.50
3	"	1	"	"	10,	12 and	14	"	2.25
4	"	$1\frac{1}{4}$	"	"	16,	18 and	20	"	3.00
5	"	$1\frac{1}{4}$	"	"			24	"	6.75
6	"	$1\frac{1}{4}$	"	"			36	"	7.75
7	"	$1\frac{1}{4}$	"	"			42	"	9.75
8	"	$1\frac{1}{4}$	"	"			48	"	11.50
9	"	$1\frac{1}{4}$	"	"				"	12.50





## Magic Boiler Compound

Removing scale by mechanical appliances, besides being expensive, affords only temporary relief and does not prevent scale formation. Scale removed by any compound whose action is chemical is often disastrous, as the compound attacks the iron, forming a scale of its own, or eats out the packing and destroys the lubricants.

Magic Boiler Compound forms a coating upon the iron which leaves no adhesive surface, causes the scale already formed to drop off, and absolutely prevents any further formation.

Magic Boiler Compound removes scale, oil, and grease, prevents foaming or scale formation in any water, and will stop leaking, pitting, and galvanic action. It will not injure iron, evaporate in the boiler, nor affect the packing or lubricants. It is not carried over in the steam and may be safely used where steam is used in manufacturing processes, as in breweries, ice houses, etc.

Barrels.....	Weighing 550 pounds
Half Barrels.....	“ 350 “
Quarter Barrels.....	“ 150 “

Write for prices.

## Contract Department

We maintain at each of our Branches a fully organized Contract Department for the application of our materials in any part of the United States. This department includes a force of competent engineers and skilled mechanics thoroughly familiar with the application of our products.

Estimates for contract work at any point furnished on application to our nearest Branch.

H. W. JOHNS-MANVILLE CO.

# A Few J-M Products

## ROOFING AND BUILDING MATERIALS

J-M Asbestos Roofing  
Asbestoside  
Asbestos Roofing and Insulating Felts  
J-M-Oid Roofing  
J-M Roof Coating. J-M Roof Cement  
Keystone Hair Insulator  
Sound Deadening Felts  
Transite Asbestos Lumber and Corrugated Sheathing  
Asbestos Roofing Shingles and Slates  
Cold-Storage Insulation  
Asbestos Sheathing  
Asbestos Fire and Damp Proof Paper  
Asbestos Concrete Coating  
Hair Felt. Wool Felt. Mineral Wool  
Asbestic Wall Plaster  
Asbestos Paper and Mill Board  
Janitor Closet Seats, Covers and Tanks

## NON-CONDUCTING COVERINGS

Asbesto-Sponge Felted Covering and Sheets  
Asbestos Fire-Felt Covering, Sheets and Blocks  
J-M 85 per cent. Magnesia Covering  
Magnesia Cement and Blocks  
Asbestos Molded Covering and Blocks  
Asbestos Air Cell Covering and Sheets  
Asbestocel Covering and Sheets  
Asbestos Cement Felting  
J-M Brine and Ammonia Covering  
Champion Covering. Aqua Covering  
Zero Covering. Anti-Sweat Covering  
Asbesto-Sponge Cement Felting  
Asbestos Hot-Blast Cement Felting  
Asbestos Sheet and Roll Fire-Felt  
Asbesto-Sponge Hair Felt  
J-M Sectional Conduit  
Asbesto-Sponge Conduit Filling  
Vitribestos Materials

## STEAM PACKINGS, ETC.

Asbestos Piston Rod Packing  
Kearsage Packing  
Sheets, Gaskets, Ring and Spiral  
Asbestos Wick Packing and Rope Packing  
Asbestos Gaskets  
Asbestos and Rubber Rings and Gaskets  
Asbestos and Rubber Cloth  
Asbestos and Rubber Tape  
Vulcabeston Packing  
Jewett Rings

## FIREPROOF CEMENTS, ETC.

Asbestos Furnace Cement  
Asbestos Plastic Stove Lining  
Phoenix Asbestos Dry Stove Lining  
Asbestos Retort Cement  
Brickline Asbestos Firebrick Cement  
Arido Dry Furnace Cement

## ASBESTOS MATERIALS

Asbestos Cloth—Fine, Medium and Heavy  
Asbestos Theatre Curtains  
Asbestos Fireproof Rope  
Asbestos Cord. Asbestos Twine  
Asbestos Sewing Twine  
Asbestos Incandescent Lamp Thread  
Asbestos Fiber  
Asbestos Soldering Blocks  
Asbestos Glass Workers' Sheets  
Asbestos Carrying-in Shovels  
Asbestos Tubes. Asbestos Fork Tines  
Asbestos Jeweler's Blocks  
Asbestos Gloves and Mittens  
Asbestos Lead Joint Runner

## ASBESTOS HOUSEHOLD ARTICLES

Asbestos Table Covers, Mats, etc.  
Asbestos Cooking Utensils  
Asbestos Document Boxes  
Asbestos Insoles

## VULCABESTON

FOR ELECTRICAL, STEAM, AND MECHANICAL PURPOSES

Vulcabeston Sheet Packing  
Vulcabeston Molded Packing Rings  
Vulcabeston Molded Gaskets and Washers  
Vulcabeston Expansion Joint Washers  
Vulcabeston Pump Valves  
Vulcabeston Railway Dust Guards  
Electrical Insulating Sheets

## ELECTRICAL SUPPLIES

Noark Enclosed Fuse Devices  
J-M Overhead Line Material  
J-M Electric Heaters  
J-M Friction Tape  
Molded Weatherproof Sockets  
Vulcabeston Insulation  
Molded Mica Insulation  
Monarch Insulation  
Phoenix Insulation  
The Electrotherm, an Electric Heating Pad  
Linolite, the new system of Lighting

## MANVILLE FIRE EXTINGUISHER

SUCCESS FIRE EXTINGUISHER

"A Covering for Every Condition"





